What's That SNAKE?

Herefordshire’s reptiles

A pack for primary schools

Activities and Factsheets for KS1 & 2

A partnership project between Herefordshire Amphibian and Reptile Team (HART) and Herefordshire Nature Trust

Pack created by Nigel Hand and Jo Polack
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Welcome to our world!

If we give children the chance to learn about reptiles as hidden treasures of Herefordshire, they will look after their habitat for years to come.

So, we have filled this pack with information about Herefordshire’s snake and lizard habitats, lifestyles and conservation needs as well as ideas on how to explore this creatively and in a way which meets your school’s learning needs.

The DVD functions as an exciting learning tool in itself, providing additional images and information for all areas covered in the pack. In showing movement, colour and sound it can also be a basis for inspiring children in poetry, art or drama.

Why not use this pack for a whole reptile project?!
We recognise that the curriculum is undergoing changes and many schools will be moving towards more topic based learning.

On p. 2 we have suggested where cross-curricular links occur. p. 1 lists just some of the science curriculum areas met.

The contents page should help if you wish to use the pack to support a particular subject area. E.g. p. 11 food webs or p. 12/13 animal’s yearly cycles or p. 22 exploring myths. p. 21 shows how to turn your outdoor area into a reptile friendly habitat.

We know that for some people snakes are a source of fear rather than love at first sight. If you are keen to introduce this fascinating and rich topic to your school but have concerns about how best to do so please contact Nigel Hand. (Contact details p. 34).

www.herefordshirewt.org

www.herefordhart.org

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The symbol to show an activity page

The symbol to show a fact page

These activity sheets are instructions or descriptions of activities for teachers rather than sheets to give straight to pupils.
The activities in this pack have been designed to help you deliver the KS 1 & 2 science curriculum areas: ‘life processes and living things’.

Remember, though, that throughout the pack there are activities designed to explore reptiles (and therefore aspects of the science curriculum) through art, poetry & stories (p. 22 onwards). Page 2 introduces some of the cross curricular links that are possible.

The target KS1 or 2 as listed below are simply a guideline. You can adapt the activity to your class.

Feeding relationships
Activity: Hungry Snake – a game KS1/2 page 9
Activity: Eco-cubes KS2 (simplify for KS1) page 10
Activity: Food webs KS2 page 11

Growth, Nutrition and Reproduction
Activity: A year in the life of our snakes KS1/2 page 15

Adaptation: Habitats - the links between animals and their environment
Exploring habitats of more than one species.
Similarities and differences in local environments.
Living things need protection.
Care for the environment.

Activity: Camouflage pick ups KS1/2 page 17
Activity: Habitat board game KS 2 page 18
Activity: Mapping snake country KS2 page 20
Activity: Homes for sale KS1/2 page 20
Activity: Save space for snakes KS1/2 page 21

The facts sheets and information also link to the curriculum and cover the above, and more areas. They can be:

- Given directly to older children to take information from.
- Read to younger children by you
- Read by you to extract information from for your own activities.
A whole project on reptiles and snakes using this pack can help you deliver all these curriculum areas and more!

**Science**
- living things....
- food chains...
- habitats...
- adaptation..
- interdependence..
- animal reproduction...
- senses

**Art and design**
- Patterns...printing...outlines....
- textures...sculpture...natural materials...observing...exploring materials ...

**Design technology**
- Designing homes for reptiles....
- making lizard land art....

**A Snakes and lizards of Herefordshire project.**

**Literacy...**
- Poems...
- stories...
- discussion...
- Varying language for purpose

**R.E./Citizenship...**
- global creation myths

**Numeracy**
- Measuring....comparing length of reptiles...size of young

**Geometry...**
- Discuss shapes of lizard vs. newt tails.
- Cylindrical shape of slow-worm.

**Graphs to show relative life span/number of young born.**
- Pp12 & 13

**Species fact sheets pp 7-10**

**PE...drama....can you move like a snake?**

**Look out for these symbols stamped throughout the pack to highlight snakes delivering all these different curriculum areas!**

**P.25 local landscape and dragon tales!**
We give birth to live young

All dressed up!
We have a zigzag down our backs

The adult adder is 50 - 60 cms long

Give me sunshine! We flatten our bodies out on warm days to take in as much heat as possible.

Males: Light grey with a black zig zig. Female is more reddish-brown.

'Dance of the adder'
Two males will wrestle to win the affections of a female!

We have a triangular head!

Vertical cat-like pupils

Yummy! We're not too fussy! We eat voles, mice, lizards, slow-worms and occasionally small fledgling birds.

We have an X or V mark on the back of our head.

The adder does have a venomous bite but won't bite unless provoked.

Shall we tell you where we like to live?

- Heathland
- Moorland
- Hillsides covered with bracken/gorse
- Woodland glades
- Old stone walls

The adder does not like water.

Introducing.......

Vertical cat-like pupils

Yummy! We're not too fussy! We eat voles, mice, lizards, slow-worms and occasionally small fledgling birds.

We have an X or V mark on the back of our head.

Give me sunshine! We flatten our bodies out on warm days to take in as much heat as possible.

'Male is light grey with a black zig zag. Female is more reddish-brown.'
Grass snakes

You may even spot us swimming across the River Lugg or River Wye. Go girls go! Female grass snakes grow bigger than males. Females can be 1m long. Males 70cm.

Our bodies are usually an olive green colour.

Our belly usually has a black and white chequered pattern.

Black bars along our sides

We have a yellow and black collar around our neck

We have a forked tongue like all snakes!

Black lines run down from eye to top lips

Messing about by the river! We like to live in damp areas like riverside meadows, near ponds or compost heaps. But they can also be found in hedgerows, on hillsides or woodland.

Our baby grass snakes have an egg tooth to help it hatch out of the leathery egg.

What’s that smell? If we feel threatened we will send out a foul smell. If this does not deter the predator we can play dead; lying on our back with our tongue hanging out!

We can live for 20 years if we’re lucky.

Egg-static! Female Grass snakes will lay between 10 and 40 eggs a year.

Swim snake swim! We’re happy to swim! Usually with our heads out of the water!

We have a yellow and black collar around our neck

Black lines run down from eye to top lips

Black bars along our sides

Egg-tooth static!
We move slowly to eat slow things—is this why we are called slow-worms?

City slickers! Of all the snakes and lizards we are the most likely ones to be found in a town.

We usually live for about 15 years.

Our scientific name 'Anguis fragilis' means 'fragile snake'. This is because, like lizards, we can drop our tail if picked up by a creature that wants to eat us. The bit of tail left behind will continue to squirm to distract the attacker whilst we slither away. Clever eh?!

We usually grow to about 30cm. Females are coppery reddish brown. Males are light to mid brown.

City slickers! We have all the snakes and lizards' leftovers of lizard legs on our skeleton! City slickers! We are the most likely ones to be found in a town.

Wet wet wet! We really like to hunt after rain and just as it is getting dark.

Can you blink? We can! We have eyelids and blink because we are members of the lizard family—snakes cannot do this.

Our tongue is broad and flat.

Yum yum yum. We'll eat all your slugs if you let us live in your garden.

Although we look like lizards we still have the leftovers of lizard legs on our skeleton. Although there is a record of a captive slow-worm living 54 years!

Our skin looks polished and we have a dark stripe down our backs. Older males lose their stripe.

We love big compost heaps, overgrown parks or churchyards, allotments, overgrown areas beside a road and heathland. We usually grow to about 30cm.

Can you blink? We can! We have eyelids and blink because we are members of the lizard family—snakes cannot do this.

Slow-Worms

Introducing.....

Our tongue is broad and flat.

Let me tell you a secret.......

I am actually a member of the lizard family!
Introducing.....Common Lizard

My favourite places to live are where we can bask in the sun but run under cover if something startles us. We like fallen over bracken and stone walls and big grassy areas with lots of insects.

We are usually between 10 and 16cm long

No I am not a newt! We are easily mistaken for each other. Lizards have scales. A newt is slower. The tail of a newt is more triangle shaped.

We are brown or green. But are often born black.

Find me on heathland, moorland, scrub covered hills with bracken and gorse, woodland glades, old stone walls.

Although we are not as common as our name suggests!

Munch munch lizard lunch.....mostly we like to eat insects, spiders, moths, grasshoppers and earthworms.

Is that OK with you?

We are small, very busy and fast (when we are warm!)

Stretch! We have long bodies and short legs

Hot hot hot! Like other cold blooded reptiles we like to sunbathe until our body temperature reaches 30 degrees Celsius. Then we might think about food!

Our scales are coarse

Also known as ectotherms!

Males have more spots than females

Male’s belly colour is yellow or orange with dark spots.

Female often has stripe down back.

Hot hot hot! Like other cold blooded reptiles we like to sunbathe until our body temperature reaches 30 degrees Celsius. Then we might think about food!

Males have more spots than females

Munch munch lizard lunch.....mostly we like to eat insects, spiders, moths, grasshoppers and earthworms.

Is that OK with you?

We are the only reptiles found in Ireland! Hoorah for us!

We have pointed noses.

We can hear you!....we have ear holes – snakes don’t.

Find me on heathland, moorland, scrub covered hills with bracken and gorse, woodland glades, old stone walls.

No I am not a newt! We are easily mistaken for each other. Lizards have scales. A newt is slower. The tail of a newt is more triangle shaped.

We have long bodies and short legs

Munch munch lizard lunch.....mostly we like to eat insects, spiders, moths, grasshoppers and earthworms.

Is that OK with you?
Snakes use their senses to catch food, escape danger and find a mate.

Snakes do not have outer ears like lizards have.

Snakes can feel vibrations through the ground. They tell it how much danger they are in by the movement and size of these vibrations.

Snakes have no legs – they don’t walk like you. They have to use their strong muscles and scales to move.

The tongue is their major sense organ.

All snakes smell with their forked tongues!

They have a tiny gap in their lips so they can poke their tongue through without opening their mouths. Snakes stick their tongues out to pick up small scent particles from the air. When it goes back into its mouth it touches a sensory spot on the roof of the mouth. This tells the snake what it has found!

Snakes have poor eyesight so they use their other senses to make up for it.

Snakes – a-slithering

Snakes have poor eyesight so they use their other senses to make up for it.

Snakes aren’t always lying completely flat against the ground as they slither. They shift their weight as they move to help the motion.

Snakes wouldn’t be very good at slithering over completely smooth surfaces like glass.

Some snakes are happy swimmers like our grass snake – they wave their body from side to side to move through the water.

Their scales provide friction against the ground which ensures they can move in the right direction.

Called the Jacobson’s organ
A few foody facts about Herefordshire reptiles.

Adders eat lizards, amphibians (frogs, newts), small or baby birds and small mammals (mice, voles). Adders use venom to immobilise prey. They leave the venom to work then follow the victim’s scent back to it. This avoids damage that could be caused by struggling with prey. Adders and other reptiles like to bask until their body temperature reaches 30 degrees before they hunt.

Common lizards hunt insects, spiders and earthworms. They stun their prey by shaking it, and then swallow it whole.

Grass snakes feed on tadpoles, frogs, newts. They occasionally eat small mammals like mice and also small birds. Prey is swallowed alive. A lot of their hunting is even done under water. If under threat in water they will hide in weeds.

When a grass snake is attacked, it sometimes emits a yukky smelling fluid. If this doesn’t stop the attacker, it will play dead, lying on its back, mouth open, tongue out until the attacker gives up. Then it will disappear into the undergrowth.

Slow-worms emerge from hiding places to hunt at dusk or after rainfall. They are not particularly speedy reptiles and feed on slow-moving prey such as slugs, (especially white or grey slugs!) snails, spiders, insects, earthworms and other invertebrates. Slow-worms are predated on by badgers, foxes, hedgehogs and big birds such as herons.

Crows, magpies, ravens and big birds of prey are the main predators of reptiles in Herefordshire. Humans are a major threat by destroying habitat or killing through fear.
The Hungry Snake game.
You need one blindfold

- The snake in the blindfold sits still.
- The rest of the children are snake food! Depending on the snake they could be vole (adder), slugs (slow-worm), tadpoles (grass snake).
- At a given signal children creep up and try to pass the snake without being heard.
- If the snake hears or senses their food they ‘catch’ them by pointing at them and the ‘snake food’ are sent back to the beginning.

The ‘prey’ could have noisy items to fetch just beyond the snake - winners being those who fetch the item without being heard.

Use this in conjunction with the ‘foody facts’ page on what snakes and lizards eat. (p. 8)
It can also lead to discussion of how snakes use their senses differently to us. (p. 7)

Discussion

Reptile feeding relationships is an opportunity to introduce as much or as little new vocabulary as you wish!

The prey is the food an animal hunts.
The predator is the animal that does the hunting!

In food chains the sun gives energy to green plants and then.....

You can also introduce the terms herbivore and carnivore...

Producer

Consumer...

Consumer...

Consumer...

producer

consumer...

consumer...

consumer...

You can also introduce the terms herbivore and carnivore...

Only eat plants

Eat other animals
Predator and Prey

Eco cubes

**Aim:** To explore ‘layers’ of ecosystem & feeding relationships.

**You need** 5 cardboard boxes from small to large that will stack on top of one another. Each box represents a link in the food chain. The children could make the boxes with you depicting the following on the sides of each box (they could be collaged from wildlife magazines or their own drawings):

- The largest box is for the sun.
- The second largest is for plants/nuts/berries.
- The third largest for the herbivores and insects (slugs, mice, spiders, insects)
- The next one for the smaller carnivores (snakes, smaller birds, weasels).
- The smallest box for the top carnivores (herons, birds of prey, badgers).

Stack the boxes largest to smallest on top.

**Discussion**

- Use these cubes to talk about who eats what.
- How plant energy comes from the sun.
- What happens if the food on the level below the snakes runs out or is very low? Imagine the box shrinking smaller than the one above it. Will the whole stack fall?
- And what happens if the box above the snakes becomes huge with too many predators?

n.b. You could make the boxes specific to one snake or lizard’s food chain - only depicting what eats them/what they eat.

As long as things stay balanced with the right number of prey and predators nature can regulate itself. It is when prey or predator is allowed to become greater (often by human activity) that the ‘chain’ or ‘web’ becomes unbalanced.

Sometimes it seems harsh to be talking with children about creatures eating other creatures—especially those that we might also be trying to protect (like frogs or newts) but it is nature!
Reptiles eat lots of different things not just one. This means the relationship between reptiles and their predators and their prey is more like a web than a chain. **Can you draw arrows showing who eats who?** Some creatures may need more than one arrow to or from them.

**A Grass snake food web**
A year in the life of our snakes

1. **Adders** **hibernate** from October to March when temperatures fall below nine degrees Celsius.
2. Males come out of their winter homes (hibernacula) 2-5 weeks before the females and **shed their skin**.
3. ‘Dance of the adder’: In Spring two males will wrestle to win the affections of a female!
4. Female **gives birth** to 3-15 live young (the adder is called ‘viviparous’ meaning gives birth to live young).
5. Babies are born between August and October.
6. New born adders stay close to the mother snake for a few days, before going off in search of food.
7. Females do not have babies each year as they do not have enough time in the winter to build up all their fat and energy for the next year.
8. Adders **can live** about 30 years.

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1. Grass snakes **hibernate** from October to March.
2. Female lays **10-40 eggs**, depending on her size, in June/July.
3. Eggs have leathery white shells.
4. Female grass snakes choose a **warm site** to lay their eggs, such as a compost heap or under rotting logs. They will often use the same place as other grass snakes. When they share like this there may be over a hundred eggs in the same place.
5. The females stay near the nest site for a few days.
6. The eggs are stuck together which keeps them in clumps.
7. The young grass snakes **hatch out** in late August/September. They have an egg tooth to help them get out of the leathery eggs.
8. A grass snake **can live** about 20 years.
A year in the life of our snakes

1. Hibernate October to March
2. A female common lizard gives birth to 3-6 live young which are 4cm in length.
3. Babies are born between June and September
4. The young grow in egg membranes inside the female lizard’s body over 3 months. They usually break out of these sacks as she gives birth or after a few days.
5. They use their heads to break through the membrane rather than an egg-tooth like grass snakes.
6. Newborn lizards are often black.
7. After they are born they don’t get any help from their mother or father. They move away quickly and feed a lot.
8. Common Lizards live about 7 years.

1. Slow-worms hibernate over winter.
2. Males will fight with each other to get to mate with the females.
3. Females may pair with several males throughout the breeding season
4. Female slow-worms give birth to 5-20 live young
5. Babies are about 10cm in length
6. When they are born slow-worms have a membrane around them which they break free of straight away.
7. Slow-worms can live for about 15 years in the wild.
Life cycle of the Adder

**Spring**
- Adders come out of hibernation from October.
- March: Adders come out of hibernation.
- Around May: Male Adders fight over a female.

**Autumn**
- Baby Adders born live.
- Around September: Male Adders fight over a female. This is known as the 'Dance of the Adder'.
- Autumn: Adders hibernate from October.
- They go into hibernation soon after birth. (Adders don't lay eggs).
- Autumn: Adders feed (mostly on voles, amphibians, mice and birds). From June to August.

**Winter**
- Hibernaculum to March underground in April.

**Summer**
- Baby Adders born live.
- Around September: Male Adders fight over a female. This is known as the 'Dance of the Adder'.
- June to August: Adders feed (mostly on voles, mice and amphibians).

Adder of the Cycle
A year in life of our snakes

Look at the year of the adder pictures.

**Can you draw a year cycle** for the grass snake, the slow-worm or the lizard using the information you have just read?

Each quarter of this circle is a different season of the year.

A year in the life of the ____________________________

**Suggestion:** KS2: Draw their own snakes and write their own text.
KS1: Cut out adder sheet and stick into quarters.
Camouflage

Many animals have a natural camouflage to avoid being attacked – especially whilst they are out looking for food or taking care of their young.

Why?

Camouflage is the art of not being seen!

A reptile’s disguise is the pattern & colour of its scales as well as how it behaves.

An adder curled up could be mistaken for bracken. Look at the patterns up close.

Lizards can dart around and then stop completely still on a stone wall or log and seem to disappear.

Herefordshire snakes and lizards are all camouflaged.

They blend in with the landscape where they live.

A bundle of slow-worms could look like dead twigs.

A gorgeous green grass snake might be easily missed amongst long grass beside a river or around a slimy green compost heap.

See dvd for good camouflage images.
Aim: To introduce the concept of **camouflage**.

You need to have a small grassy, nature or tree area.

**You need:**
- 4 or 5 different coloured balls of wool. Two colours should be bright and stand out against the background eg bright red and bright blue. The others should be more muted greens and browns.
- A piece of card for each child with double sided tape on it. (black or white card shows up the range of colours best).

**Preparation:**
- Cut up lots of strands of each colour - about 4 cm long.
- Before the children come out sprinkle the strands of wool around the area.

**Action!**
Ask the children to collect as many strands of wool as they can find and stick them onto their card in a row *in the order they find them*.
Either give them a time limit and use this cut off point to talk about how the bright colours stood out and are on their card first or if they are enjoying it continue until most of the strands have been found and they can look at the order in which their colours go – i.e. mostly bright colours first. The ones that ‘blend in’ take longer to find.

Relate this to the an adder with its brown or grey zig zag markings hiding in the grass or a grass snake in a compost heap! The more it blends in with its surroundings the less likely its prey is to find it. Look at the DVD.

**Discussion**
Camouflage is great to explore through art...making patterns...comparing markings.... shade and light.....using natural materials.....

There are children hiding in this forest! They camouflaged themselves with nature they found there.
You find a patch of bracken on a hill. Move on 2 places.

Yikes! A fire on the hill side. All the bracken is burnt. You have to leave. Back to start.

We need the right habitat to survive!

Adder

Grass snake

Someone has made a pond at the end of their garden. Move on 3 places.

A quiet bank at the edge of a wood is perfect for you to hibernate. Move on 2.

A churchyard has a large compost in a quiet sunny place. Lay your eggs here. Move on 2.

Your piece of woodland is cut and paved for cars. You need a new home. Go back 2 places.

A quiet bank at the edge of a wood is perfect for you to hibernate. Move on 2.

Your piece of woodland is cut and paved for cars. You need a new home. Go back 2 places.

New houses are being built and the whole area is being dug up just as you hibernate. You home is destroyed. Back to the start.

Farmer leaves edges of his field with tall wild plants growing. You can move freely through here. Move on 3 places.

Long grass around your home is cut down. You are afraid to go out in the spring (you might be caught and eaten). Go back 2.

Farmer leaves edges of his field with tall wild plants growing. You can move freely through here. Move on 3 places.

But you need to get a ssssssix to sssstart!

At finish draw a happy smile on your reptile's face!

- Play in 3's or teams.
- Cut out the 3 reptiles from next page.
- Chose which player/team is which reptile.
- Place your reptile on the correct tail.
- Take it in turns to roll dice and move along your reptile.

We need the right habitat to survive!
Your counters to cut out for the habitat game

adder
Grass snake
Slow-worm

adder
Grass snake
Slow-worm

adder
Grass snake
Slow-worm

adder
Grass snake
Slow-worm

adder
Grass snake
Slow-worm

adder
Grass snake
Slow-worm

adder
Grass snake
Slow-worm

adder
Grass snake
Slow-worm

adder
Grass snake
Slow-worm
For these two habitat activities the children can find information on where Herefordshire’s snakes and lizards live from the fact sheets at the beginning of this pack, the enclosed leaflets and further research in books/internet (see list at end of pack).

Mapping snake country!

- On one piece of paper – large or small children create a map showing the different types of landscape, hills covered in bracken, woodlands, towns around Herefordshire. Make sure this includes the sorts of places the snakes and lizards would live.
- Think up different symbols for each snake species.
- Give the map a ‘legend’ – a box where the symbol for the snake habitats and landscape features are shown and named.
- On separate card draw and cut out little snakes/lizard symbols.
- Create a few clues for where each snake might go – decide a code, for example if it lives on a hill maybe a rhyme for the word ‘hill’. Or a description not using the word itself: ‘I live amongst a plant which is brown and scratchy’.
- Then children swap snakes, map and clues with a partner, or work in groups swap with another group and see if they can find the places the other snakes like to live.

Habitat mapping can be as imaginative as you like!

- Create old treasure maps – ‘uncover the dinosaurs of our local lands’.
- Or link to food chains – create secret maps from one predator to another about where to find their next meal.
- Or a map for new snakes moving here to show them the good places!
- You could also make 3D maps – collages and recycled junk landscapes

Homes for sale!

Create an estate agent’s window. Each buyer and seller is a snake or lizard! The children can create posters describing the best features of their home: Sunny area for basking, well camouflaged, a cosy place to hibernate, lots of long plants to move through.

The posters could have pictures of inside and out.
Save space for snakes!

Do you have space at school to create habitats for grass snakes and slow-worms?

Leave an area of longer grass and wildflowers.

Build a reptile refuge. Logs and rocks covered with grass, grass cuttings and leaves.

In the sun, amongst long grass, put down carpet or pieces of roofing felt.

Create compost heaps out of grass cuttings, leaves and wood chips for hibernating and egg laying (grass snake).

Dig a pond to create food and hiding places. (Don’t put fish in it!) Leave some long grass and boggy wet patches around the pond.

Hold a special snake celebration day!
Ask friends and family—to spend a day helping create your reptile habitat.

They might have natural materials from their gardens you could use.

Design mini versions indoors first!

Do you have space at school to create habitats for grass snakes and slow-worms?
Snake stories around the world

Slippery, hissing snakes are the stuff of myths and legends. Stories from many lands tell of adventures with snakes, serpents, lizards and dragons.

Ireland
It is said that Saint Patrick stood upon a hill, using a wooden staff to drive the serpents into the sea, banishing them forever from Ireland.
One old serpent resisted, but Patrick made a beautiful box just like the snakes home and invited the snake to enter. The snake insisted it was too small and the two argued. Finally to prove his point, the snake entered the box to show how tight the fit was. Patrick slammed the lid closed and threw the box into the sea.
No more snakes in Ireland to this day!

Indian snakeboats
The people of the Haripad village decided to build a beautiful temple. In it they would install an idol—a figure to worship. Someone had a vision that they should install a serpent idol which they would find in the Kayamkulam river. The exact location of the idol they would find under a whirlpool in the river. The people found the idol as the vision told and brought it back in a boat, escorted by devotees in other boats. In remembrance of this event a three day water festival is conducted each year. The villagers flock to enjoy this colourful festival of snakeboats.

How chocolate came to Earth!

Quetzalcoatl was a plumed serpent God in Central America a long time ago. He took a plant from his brothers the Gods and gave it to his people as a special present. His brothers had guarded it jealously because they felt that the drink that made from it was only good enough for Gods.

Quetzalcoatl planted the small shrub with dark red buds on its long leaved twigs. He asked the people to feed it with rain and adorn it with flowers. The small tree bore fruit and Quetzalcoatl collected the pod. He took these to roast and taught the women how to grind it and mix it with water in calabash cups to make chocolate.

This mixture was sacred and bitter. (The origin of its Mayan name is kahau from Kab meaning bitter).
When the Spaniards came to Central America they mixed it with sugar and milk and made the drinking chocolate we know today.

Some are heroes carrying people in trouble on their backs.
Some are nasty and terrifying.

Each year in China is represented by a different animal. This is repeated in a cycle of 12. Snakes and dragons are two of the twelve. Were you born on one of these years? What about your brothers or sisters, parents or grandparents?

Snake

Dragon

Can you draw these symbols?
1. In dreamtime our ancestors walked the song lines of the earth. The Earth they walked was a brown flatness. The only colours shone in the sky. After a storm, as the sun and rain met, magic colours hung in the air, spanning Australia: the Rainbow. But the Rainbow wanted to go on a journey too.

2. So the rainbow drank its own magic and writhed into life. Each raindrop turned into a scale and each glimmer into a twist of muscle. It transformed itself into a snake. Its body a blaze of colour, it snaked its way down the sky to the edge of the earth. Its jaws were red, it’s tail violet. Its iridescent scales every shade in between.

3. The Rainbow Snake was massively heavy. As it slithered along, it carved a trench through the flat countryside. These became huge valleys. The mounds either side were mountains. The next rain which fell rushed through these valleys into rivers and pools. The earth was changed by the snake.

4. The Rainbow Snake travelled through the bush. Every now and then it raised its scarlet head and tasted the air with its flickering tongue. It felt vibrations and picked up voices but did not understand what they were saying.

5. One day, it found a happy laughing people whose language it partly understood and whose music made it dance. The dancers froze. The music stopped. Towering high above them, jaws agape, swaying to the music the people saw a gigantic snake with scales of every colour.

6. The snake looked down on them. People trembled with fear. ‘Please do not be afraid. I am Rainbow Snake from the sky, I am happy for finally I have found people who make the music I have heard in my dreams.’ ‘In that case, you’re welcome, friend!’ said an elder of the tribe ‘on with our celebrations!’

7. After all the feasting and partying Rainbow Snake coiled itself round the village and sheltered it from the wind. Its sides shaped the land during day and in the evening it ate and drank and talked with the villagers. It was a happy time. In honour of the Rainbow Snake the people decorated their bodies as the snake was patterned.

8. Then it happened. The terrible mistake.

9. Rainbow Snake fell asleep that night and, mouth wide open, dreamt it felt the pleasant tickle of rain trickling down its throat. It tasted something sweet like raindrops on its tongue and swallowed. Too late! The shapes in its mouth were solid. Two boys had crept into the Snake’s huge mouth, mistaking it for a cave. Now they were deep in its coiling stomach the Snake could not fetch them back. It had only done what was natural. But what to do now?

The Rainbow snake knew he could not hide what had happened for long, he would not be able to bear the sound of the weeping mothers or the shame of what he had done. Better to slip away, forget old friends, try to find new ones.

Away it slithered, carving a great valley in the wet earth as it left and wrapped itself around the mountain that it had formed at the end of the valley and slept.
10. The snake’s stomach was full. Snores rolled like thunder down every side of the mountain. Boulders tumbled and rocks fell. But three brothers from the tribe clambered up, knives clenched in their teeth. Although the snake had been their friend they wanted their boys back. They slit open the side of Rainbow snake; scales fell in a rain of indigo, green and blue. They shouted inside to the boys.... But we must not forget that the snake was made of the great magic of the sky and had already part digested the children. They had become part magic too. Out of the stomach, past the rescuers fluttered not two boys but two beautiful, happy birds, their feathers shining indigo, green and blue. They soared high in the sky, circled the mountain and flew off, singing joyfully.

11. The three brothers looked at each other. They could not catch these birds and why be sad for boys that had been given such magical, colourful freedom?

12. They turned to go down the mountain but noticed their friends at the bottom jumping up and down, pointing at the snake. The snake groaned, feeling a horrible pain in its side and a cold wind blowing in to its stomach and a sudden leaking away of its magic out of the hole. It felt miserable.

13. I knew my mistake might end our friendship’ it hissed ‘but I never knew you would capable of such violence towards me.’ You have attacked the Rainbow Snake. You have shed the scales of the Sky Creature. My stomach is now so empty of food and magic there is only one thing I can do. Eat every one of you.

14. The tongue darted from its mouth as forked lightening. Its tail thumped thunder. It crumpled the mountain into many different hills and thrashed the land around inside out and back to front.

15. People were terrified. Some wanted so much to get away they ran on hands and knees and wore down their legs until they became four legged creatures. Some leapt so far and so high that they turned into kangaroos. Some hid under rocks and came out some time later as tortoises. Some were frozen with fear. They put down roots and became trees. Others climbed the trees and turned into koala bears with big round frightened eyes. Some dug furiously into the earth and became underground animals forever.

16. At last Rainbow Snake exhausted itself. It hurled itself into the sea. It slipped away through the circle of the setting sun.

17. And next morning after this huge, stormy change on earth Rainbow Snake was back in place again. A rainbow, spanning the sky like a breath of peace: a trick of the light as the sunlight catches rain. A reminder that there will be calm and beauty after stormy nights. But looking down on Earth, the landscape it saw was transformed. No longer flat and barren, it had valleys and mountains, trees and many, many animals. The lives of the first people had been changed too. Some people were animals, some plants, and some had just had their eyes opened wider than ever before!

Story as told to Jo Polack
1. One day while playing in the woods a little girl called Maud found a baby dragon. It had soft green scales, small silky wings and was hardly bigger than a cucumber. When the little creature saw Maud it was so happy it skipped in circles. Maud took the baby dragon home and gave it a saucer of milk.

2. Maud’s parents told her to return the creature. Maud and her strange pet walked sadly back to the woods. She took it to her secret den, a shelter of twigs, bracken and branches. There she could visit it, feed it and play with it.

3. The dragon grew bigger and bigger. Soft green scales became hard and iridescent. Silky wings grew strong and leathery. The saucers of milk that Maud fed it no longer satisfied it’s ravenous hunger. It began to hunt for more food.

4. The dragon became so hungry he began to hunt farm animals. The people became angry. When the bold farmers attempted to deal with the dragon – he discovered something else he liked – humans! He roasted them first with his fiery breath.

5. Maud was upset. Her playmate had turned into a monster. How could she stop him? She alone, was safe with him. She pleaded with the dragon to stop eating the villagers. But he was only doing what came naturally to him.

6. Eventually Garston, the archer came to help. He knew the dragon liked to drink in the special spot where the rivers met. Garston hid in a cider barrel and floated down the Lugg. When he passed the dragon he shot his arrow.

7. Maud wept for her beloved dragon but understood the village and their farm animals could now live in peace.

There is a Serpent Lane in Mordiford!

Children of Mordiford recreating the dragon in mud!
Go to www.wordle.net
It is an internet site where you can create these ‘word clouds’.
It can be used as a fun way to help children explore language within a topic.
You simply type words into a box in the wordle programme and click ‘go’.
The more you repeat words, the bigger they will appear in the final image.

Suggestions:
• Chose favourite reptile words/focus on word groups e.g. describing reptile behaviour or habitat.
• Printed out and use them as a starting point for writing poetry or stories.
• Use as book covers or displays.

A grass snake is a beauty to know,
How about our friend not foe?!
Sneaking, sliding, seeking, hiding
Can you make them somewhere to go?

A pond and a boggy patch,
Helps the grass snake snatch
A bite to eat, a special treat.
A newt or a frog they might

Rotting logs and a heap of compost,
To keep them warm in the frost.
A big mound covered up well,
To make sure their eggs are not lost.

A pile of damp leaves and grass,
Is not too much of a task,
It’ll make sure the eggs hatch out.
And the baby snakes slip away fast.
Reptile rhymes...

Watch the DVD for some inspiration.
Use the snake here for a base.
Come up with snake words, sounds, descriptions... write these in the blank boxes.
Cut these out.
Copy and cut out the words we have given you.
Mix and match the words to come up with snake poems.
Add more words if you need them.

Cut out the wiggly snake and stick your poem along the snake.

Or how about going big with poetry? Draw a huge snake on the playground in chalk. Write the words out on A4 card or pieces of wood and places these along snake to make poetry.
Poems are a good way of getting a message or thought across. Do you feel strongly we should look after reptiles and their habitat?

The Adder

Silver shiny
in the sun
lost his skin
three days gone-

A time in May
on the trail
of pheromone
for a female
he has gone
following her
perfume
quite love lorn

He will be torn
by another male
who he’ll see off
rising up
strutting his stuff
in a courtship dance
of strength
to strength - writhing and twisting
and at great length
the stronger male
after this exhibition
forces the weaker
into submission
but the weaker may return
to be seen off again
by the first
then the winner will surely stay
to protect his mate
in a devoted way.

The Demise of the Adder

The demise of the adder
is terribly sad
The poor little creature
so misunderstood
Devoted or loyal
to his partner or wife
No male can get near
within an inch of his life
He’ll rise up and do
a wonderful dance
Just like a snake
being charmed, in a trance.

Your chance of being bitten
is terribly slim
When he’s hungry he’ll bite -
not just on a whim.
If you don’t annoy him
and leave him alone
he’s happy living
alongside others
of a similar tone.

He bites to eat food
by poisoning his prey
But he really isn’t a killer
with humans at bay.
The last time someone
died of a bite
was in 1975
so please don’t take fright
for our adders are growing
extremely rare...

...We need to treat them
With the utmost care.

Your turn!

Do the pictures in this pack or on the DVD inspire you to write about a Herefordshire reptile?

Can you describe their patterns? ...do they do funny things? ...Can they move?
Make that snake!

Make use of the delicious Hereford clay soil! Mix up a bucket full. Make clay reptiles writhing along branches of trees or the playground. Can you put markings on them to show if they are adders, slow-worms or grass snakes?

Reptiles in their elements!

Lizard land art. If you are creating snake habitats on the school grounds why not shape them like snakes or lizards?

Find a snake like stick and paint it!

Its a bright autumn day. Go out and gather leaves to make a long snake in the grass or playground.

Leaves by children at Queenswood Arboretum

Make use of the delicious Hereford clay soil! Mix up a bucket full. Make clay reptiles writhing along branches of trees or the playground. Can you put markings on them to show if they are adders, slow-worms or grass snakes?

Carnival time!

Look up pictures of Chinese dragons (or any carnival structures). Make yourselves a giant carnival snake that you can all fit under and move. You can use big hoops of willow (p.37) under a sheet decorated with scales. Fold card or scrunch paper to cover with nature for a large snake head. Poke up canes under head to hold. Dance!

Or snake head dresses? Create basic crown with card. Add scraps of material, nature or even your own prints to make a long serpent snaking down the child’s back.

Teacher notes

Leaf snake by children at Queenswood Arboretum

Photo: WildPlay
Plaited adder
Cut strips of about three inches wide (as long as you like) but tapered at one end. (Or use 3 legs of tights!)
Place three strips together at tapered end and tie them together (the tail). It can be easier to work in two's—one holding the tail of their partner's snake whilst their partner plaits and then swap.
At the end of the plait tie two of the strips together. Wrap the end of the third piece around the knot and tuck in the edges to make a face. Use a tiny rubber band to secure the head if needed. Glue on eyes and a tongue. Look back at the fact sheet to check the right shape for adder eyes.

All tied up snake!
You need: Old ties, wire (could be from old coat hangers) stuffing (small scraps of material or stuffing), eyes, glue.
1. Insert the hanger into the tie. You can fold down the ends of the wire with some needle nose pliers so that the edges are very smooth before the children use them.
2. Stuff the tie from each end.
3. Fix the tail end of the snake closed (glue, staples, sewing).
4. Push some stuffing up into the point of the snake's head (the wide end of the tie). Close this end up and add eyes to finish.

For display bring in some sticks and branches to the classroom and wind your snakes around them!

Origami lizards. Check out the many u-tube videos showing how to make these skittery critters.

Aboriginal painted snakes. Can you paint sticks you find or draw blank ones on card to colour? Read Rainbow Snake first.
Yikes! Snakes that fly!

1. Fold paper in half

2. Measure 1.5cm in from the top. 12cm in from the bottom. 13cm down from the top.

3. Fold along dotted line between top and bottom of paper
4. Fold out top leaf

5. Put strong tape down centre.

6. Turn kite over. Pull up flap. Put piece of tape 13cm from top of flap for reinforcement (where line goes).
7. Punch through flap. Tie on line (thick cotton or very thin string)
8. Tape on cross cane (thin bamboo, e.g. pieces from old blinds, or thin stick)
Add crepe or plastic bag tales in snake colours (approx 3cm x 135cm).

9. Decorate a snakes head on the paper and fly!

Kites that fly given to WildPlay by Lily Horseman
Encourage children to look at the posters and read the fact sheets on the adder before colouring in.

So that this becomes an opportunity to learn the identification.

decorate snake markings down its body and head... give it some eyes... maybe stick on a tongue! Finally fold again along centre.

Cut out this shape and fold along the dotted line... 2 - 4 in direction shown by arrows.

your finished snake could look like this!

you can make gentle folds along it to make it wiggle...

... or put it on two sticks...
- Chose to do an **adder, grass snake, slow-worm**.
- Look at the leaflets and information and **colour in the spiral using the correct markings for your chosen one**.
- Cut out spiral
- Use a hole punch or needle and thread to hang them from the back of their heads. You can soon have a class room full of Herefordshire reptiles!
Further information & useful websites

www.herefordhart.org
Herefordshire Amphibian and Reptile Team
Photos, events, records, species information for Herefordshire.

www.herefordshirewt.org  Phone: 01432 356 872
Herefordshire Nature Trust

www.bbc.co.uk/nature/wildfacts/animals_a_z.shtml
A-Z of animal facts. Links to other science and nature info.

www.arc-trust.org Amphibian and Reptile Conservation, information, membership, resources.
www.arc-trust.org/dragons/ (encouraging reptiles and amphibians near you)
www.arkive.org Useful info on species + good video clips of animals in habitats
http://www.animalcorner.co.uk/reptiles/reptiles.html Range of info on British wildlife.

www.teachernet.gov.uk/learningoutsidetheclassroom
Resource to help professionals provide high-quality cross curricular outdoor experiences.
www.englishwillowbaskets.co.uk Willow supplies for craft

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Nigel Hand, Phyl King, Will Watson
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Britain’s Reptiles and Amphibians
A Guide to the Reptiles and Amphibians of Great Britain, Ireland & Channel Islands
Howard Inns
Wild Guides

Two excellent books full of activities for introducing children to nature in creative and unusual ways!
Talking to The Earth, Gordon MacLellan, Capall Bann Publishing (ISBN 1 898307 43 1) www.capallbann.co.uk

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What's that?