Teachers may choose to use these ideas in any way they like.
English and Literacy

Write True or False:

1) Sometimes the sky is blue. ................................................

2) Birds lay eggs. ..............................................................

3) Elephants are very small animals. ......................................

4) A tiny baby can’t talk. .....................................................

5) Cats go, “Woof woof.”. ....................................................

6) Tadpoles grow into frogs. ................................................

- Now write a sentence about ants that is true.
  ..................................................................................

- Write a sentence about fish that is false.
  ..................................................................................

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1) Tom had $5 and Ben had $7.
   a) How much did Tom and Ben have altogether?

   b) Tom spent $3 and Ben spent $5. How much did they spend altogether?

   c) How much did Tom have left?

   d) How much did Ben have left?

2) One day a spider met a fly.
   a) How many legs did they have altogether?

   b) How many legs and eyes did they have altogether?

   c) How many more legs did the spider have than letters in ‘spider’?

   d) How many more legs did the fly have than letters in ‘fly’?

3) Susie is 8 years old and Bonnie is 5.
   a) What are their ages added together?

   b) How many years older than Bonnie is Susie?

   c) How old will Bonnie be in another 4 years?

   d) How old was Susie three years ago?
4) Down near the pond were three ducks and two bees.
   a) How many birds and insects were there altogether?
   b) How many legs did the ducks have together?
   c) How many legs did the bees have together?
   d) How many more bees’ legs were there than ducks’ legs?

5) Alice had 7 stickers, Jill had 3 and Lilly had 5.
   a) How many stickers did the girls have altogether?
   b) How many more stickers than Jill did Alice have?
   c) How many more stickers than Lilly did Alice have?
   d) How many more stickers than Jill did Lilly have?

6) Two cows were standing near two birds.
   a) How many legs did the cows have together?
   b) How many legs did the birds have together?
   c) How many legs did the cows and birds have altogether?
   d) How many more cows’ legs were there than birds’ legs?
Multiplying by Two

Look at this example. How many owls are there?

\[2 \times 2 = 4 \text{ owls}\]

**Now do these** (*write in all the numbers*)

1. How many fish are there?

\[= \text{ fish}\]

2. How many kittens are there?

\[= \text{ kittens}\]

3. How many puppies are there?

\[= \text{ puppies}\]

4. Try this one. *Put in the missing pictures and numbers.*

\[= 12 \text{ bunnies}\]
Science and Nature

Visit to the Zoo

We can use zoos to encourage children’s interest in the natural world and to introduce them to the many fascinating forms of life.

Guessing games can help your students understand structure and function.

“Why do you think the seal has flippers?” (The seal uses flippers to swim through the water.)

“Why do you think the gibbons have such long and muscular arms?” (Their arms help them swing through the trees.)

“Why does the armadillo have a head that looks like it’s covered with armour, as well as a body that’s covered with small, bony plates?” (The armour and the small, bony plates protect it from being attacked by predators.)

“Why is the snake the same brown colour as the ground on which it spends most of its time?” (As snakes evolved, the brown ones didn’t get eaten as quickly.)

Children can learn about organization by seeing related animals. Have them compare the sizes, leg shapes, feet, ears, claws, feathers, or scales of various creatures. Ask them, “Does the lion look like a domestic cat?” “How are they the same?” “Does the gorilla look like the baboon?”
An octopus’s beak is similar in shape to a parrot’s beak and is the only hard part of its body. Octopuses have no internal or external skeleton, allowing them to squeeze through tight places. They are highly intelligent animals, with excellent memories. Young octopuses learn almost no behaviours from their parents, with whom they have very little contact.

The octopus inhabits many different regions of the ocean, including the ocean floor. It moves about by crawling or swimming, all the time trailing its eight arms behind it.

Octopuses have developed several ways of defending themselves against predators, including the squirting of a dark blue ink, moving swiftly (jet-like) through the water, and hiding in places where they are extremely difficult to find. Octopuses also use camouflage: for example some species can take on the spiky look of seaweed while others can give themselves the scraggly, bumpy appearance of a rock.

Of the 300 or so octopus species all are venomous but only one kind, the blue-ring ed octopus, is deadly to humans.
Octopuses have three hearts. Two hearts pump blood through the gills, while the third pumps blood through the body.

Though octopuses can be difficult to keep in captivity, some people keep them as pets.

**Talk about or Write about**

1. What would you say is the most amazing thing about octopuses?

2. An octopus is easily able to move in and out between undersea rocks that are close together. What enables them to do this?

3. Young octopuses learn almost no behaviours from their parents. Is this true of other animals? What kinds of behaviours do adult humans teach their children?

4. Apart from the ocean floor what are some other regions of the ocean?

5. Sharks have many sharp teeth, stingrays have a lethal sting, swordfish have a razor-sharp sword on their snout. Octopuses have no such weapons. What do they have that protects them from their enemies?

6. Can you think of any reason(s) why octopuses need three hearts while we humans need just one?

7. Why do you think it is difficult to keep octopuses in captivity?

8. Would you like to have a pet octopus? Why/Why not?
Here are some different types of transport: bus, train, tram, ship/boat, plane, motorcycle, car, bicycle. There are others too.

**Talk about or Write about**

1. Which of the above forms of transport do you most enjoy travelling in/on? Why?
2. Which do you think is used by the most people?
3. Some are used mainly to take people away on their holidays. Which ones are these?
4. Which do you think is the cleverest invention, and why?
5. Which can carry the most people at a time?
6. Which is the fastest? The slowest?
7. Which can be used to take children to school?
8. Which can be used to take people to work?
9. Which costs the most to make? Why is it so expensive to build one?
10. What would it be like if none of the above forms of transport existed?
11. Which can go faster than the fastest animal (mammal)? *that’s about 80 km/hr*
12. Most of the above forms of transport have what is known as ‘horse power’. Do you know what that is?
13. Which animals have been, and still are, used to transport humans?
14. What would be some reasons that camels are still used to carry people across desert lands?
15. Why are donkeys suitable for carrying people up and down steep hills, along narrow paths?
16. Why do you think horses were used to carry warriors into battle?
17. Elephants are sometimes ridden. When and by whom?
18. What advantages do modern vehicles have over animals as means of transport?
19. What advantage(s) does animal transport have over modern vehicles?
20. Which animals, if any, have you ridden? Describe your experience. If you have never ridden any animal which one would you most like to ride?
Saturn is the 6th planet from the sun. It has rings made of ice and rock. Saturn has (as of 2011) 62 moons. This means if you were on Saturn and looked up into the sky at night you would see many moons (not just one like we do here on Earth). You wouldn’t see all 62 moons because some would be on the other side of Saturn.

Saturn’s atmosphere contains gases that are poisonous to us; humans and animals like cats, dogs and all others could not survive there. Anyway, we couldn’t live on Saturn because it is too cold ... the average temperature there is around -185°C! Another thing we know about Saturn is that it has extremely violent thunderstorms.

Our planet, Earth, takes one year to go around (revolve around) the sun but it takes Saturn 29 years to orbit the sun just once. This means that if you lived on Saturn you would have to wait 29 years between birthdays!

Saturn is a long, long way from us. A very fast rocket travelling at 10 000 km/hr would take 16 years to reach Saturn from Earth.

Continued on next page
Talk about or Write about
1. How many planets are between the sun and Saturn?

2. Saturn’s rings are made of rock and ice but they look like curved lines in photos. Why do you think this is?

3. If you were on Saturn and it was night time why wouldn’t you see all 62 moons?

4. What are two reasons we could not survive on planet Saturn?

5. What does orbit the sun mean?

6. If a baby was born on Saturn how many years would it have to wait for its first birthday?

7. How long would it take a rocket travelling at 10 000 km/hr to get half way to Saturn after leaving Earth?

8. Nobody knows if anything lives on Saturn. There are probably no people or animals and maybe no plants. But who knows? Try to think of something that might live on Saturn. What is it? What does it look like? What does it do? (maybe you could sketch it)
Imagine someone gives you a blue balloon and they tell you there’s something special about it. But you won’t know why it’s special until you begin to inflate it (blow it up).

So you take a breath in and then blow into your balloon.

To your amazement a tiny voice comes from the blue balloon. It says, “You took a breath in before you blew into me. The air you breathed in contains a lot of oxygen (which is a gas). But then when you blew into me you breathed out a different gas, called carbon dioxide. Would you give me some more please?”

You are astonished to hear a balloon talking but you do as requested ... another breath in, another blow into the balloon.

“Ah, great,” says your balloon, “I enjoy being inflated with your carbon dioxide. Keep going please.”

So you keep taking in-breaths and keep blowing out into the balloon. Your balloon is getting bigger and you think it might burst. So you stop.

“No, no ... keep blowing,” requests the little balloon voice, “I’ll let you know when to stop.”

So you blow and blow and blow. After a few minutes you’re holding an enormous balloon ... a great big blue one. Then comes the tiny voice again. “OK, that’s enough thank you. Please release me from the grasp of your fingers.”
You do what the balloon asks and you watch as it flits and fizzes away in big twists, twirls and loops before landing with a soft splat.

As you bend down to pick it up the now-little, deflated balloon says, “That was great fun. Let’s do it again some time.”

**Talk about or Write about:**

1. What your balloon told you about breathing in oxygen is true. Do you think dogs, cats and other animals breathe in oxygen?

2. Did you know that oxygen is not the only gas in the air around us? Another important gas in the air is nitrogen.

3. The balloon said that we breathe out a gas called carbon dioxide. Do you think dogs, cats and other animals also breathe out carbon dioxide?

4. People, dogs, cats and other animals are not the only living things. What other things live? Yes - plants, including trees, bushes and flowers.

5. Do plants breathe in and out? Yes, they do. But unlike animals, plants breathe **in** carbon dioxide and breathe **out** oxygen!
I know a girl who loves the beach. She’s seven years old, has blonde hair and her name is Luma.

Luma likes to sit on her towel and watch the waves come in. She also likes the feel of the warm summer sun.

Something else that Luma enjoys is writing her name in the white beach sand. She spreads all the fingers of one hand out and carves out her name in big letters ...LUMA.

One day she had just finished writing her name when a girl with black hair ran up to read it. “Oh, that’s a nice name!” she said.

Luma was pleased to hear this so she said, “Would you like to write your name in the sand too?”

“Yes”, said the girl with black hair, “where shall I write it?”

Luma said, “There are no rocks or seaweed in front of my name. So write your name there.”

So the girl with black hair spread out her fingers and wrote her name in front of Luma’s.
This is what she wrote: PETA

The two girls looked at what they had written. Their names looked like one big name: PETALUMA.

Both of the girls liked this big word they’d made with their names. They played with each other in the sand and then walked along the water’s edge with the waves lapping at their ankles.

Soon it was time to go home.
Luma had made a new friend at the beach. She hopes that when she goes to the beach next time her friend Peta will be there again.

**Talk about or Write about:**

1. What things does Luma like to do at the beach?

2. Which sentence in the story tells us what season Luma goes to the beach?

3. Luma and Peta made a big word with their names. What vowels are in that big word?

4. How does Luma write her name in the sand?

5. Which word in the story is a type of plant?
Why is the Sky Blue?

We see everything with our eyes.  
But when it’s very dark we see nothing, even if our eyes are open.  
Why is that?  
Because no light is going in through our eyes.  
When it’s daytime there IS light going in through our eyes (if they’re open).  
Where does this light come from?  
Light comes from the sun.  
Sunlight moves ...it travels .....at amazing speed.  
How fast does light travel?  
Well, a car going fast can travel about 100 kilometres in one hour.  
**LIGHT GOES 300 000 KILOMETERS EVERY SECOND!!!!!!!**  
(that’s the time between two normal-speed finger clicks)

Light from the sun bounces off a rock and goes off in every direction.  
If we face the rock with our eyes closed we don’t see it, even though a light ray (a sunbeam) has bounced toward our eyes.  
But if we face the rock with our eyes open we do see it because a sunbeam bounces off the rock and into our eyes.  
It’s the same with EVERYTHING ELSE that we see.  
If we face something with our eyes closed we don’t see it.  
Why not?
Because our eyelids are closed and light can’t get in.
But when we open our eyes we can see it ...a rock, a car, a toy, a person ...anything we are looking at.
But we have to HAVE OUR EYES OPEN.

What colour is the light that comes from the sun?
White.
Well, it LOOKS white and it IS white BUT....
Sunlight is made up of all the colours of the rainbow (red, blue, yellow, green and other colours) but we can’t see these colours when they’re all mixed up together in a sunbeam.
Each of those colours is invisible to us and a sunbeam (a ray of sunlight) LOOKS white to us, even though it has all those other colours mixed up inside it.
The MIXTURE of all the colours makes the sunlight look white to us.
This is all part of Nature ...
...Nature is amazing!!

In the air above us there are billions of tiny things called particles and molecules. They’re so tiny, we can’t see them. On days when there are no clouds rays of light from the sun (sunbeams) ‘hit’ some of these particles. The white light splits up a bit and only the BLUE part of the white sunbeam keeps travelling towards our eyes.  

And that’s why the sky looks blue.

Never look at the sun when it’s high up in the sky: it can damage your eyes very badly. The only safe times to look at the sun are at sunrise and sunset.

Can you say why grass looks green?