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| Stories |
| Fox ears |
| Light lines |
| Do not look |
| The sea is blue |
| No sound |
| Many colours |
| High bee |
| Flap those wings |
| Ear, ear |
| During the day |
| Can you hear me? |
| Animal accents |
| Alaskan rainbow |

1. What do big ears help you do?
2. What shape is the path that light takes?
3. Why should you never look straight at the Sun?
4. Why is the sea blue?
5. There is no sound in space because there is no --- to carry it.
6. What can white light be split into?
7. Name two sounds that have a high pitch.
8. What kind of sounds can children hear that adults can’t?
9. What do bee’s wings flapping create in the air?
10. When vibrations in the air reach our ears, we ---- a sound.
11. When vibrations in the air reach our ear the make what vibrate?
12. What message does that send?
13. What does the Moon not make?
14. So where does its light come from?
15. Sounds get what the further you are from them?
16. What word means the loudness of a sound?
17. What does the way cows moo depend on?
18. What do raindrops do to sunlight?

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| Stories |
| Whale song |
| Whistle |
| Whale talk |
| Too close for comfort |
| Silly shadows |
| Ship’s horn |
| Moon shadows |
| Light through leaves |
| It’s still not safe |

1. Why does the blue whale sing?
2. It’s not just air that sound travels through; it travels through ----- too.
3. A loud sound can travel a ---- way.
4. What kind of sound does a whistle make?
5. Big vibrations make what?
6. What is the best way to keep in touch under the ocean?
7. What do whales make high-pitched sounds for?
8. What do whales make low-pitched sounds for?
9. What can you do to make the sound from a loudspeaker less loud?
10. How are shadows made?
11. What word is used for the low-pitched sound of the ship’s engines?
12. What word is used for the low-pitched sound of the ship’s horn?
13. When does Vivian like to walk?
14. What is moonlight?
15. What effect did the architect have in mind for the new museum in Dundee?
16. What is the Japanese word for the appearance of sunlight through leaves?
17. It is not ---- to look at the Sun even if you’re wearing sunglasses.
18. Not all sunspecs reduce the amount of what reaching your eyes?
19. What kind of light can damage your eyes?
20. Why does the pupil of your eye expand when you’re wearing sunspecs?

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| Stories |
| Singing gorillas |
| Pupils get bigger in the dark |
| Mummy |
| Animals see more |
| Big dish |

1. What do gorillas do as they eat?
2. What type of sound is the humming?
3. The other sound they make is like what?
4. Why does the pupil of the eye look black?
5. What happens to the light that goes through the pupil?
6. When does the pupil get smaller?
7. Why does it do that?
8. Why does the pupil get bigger in the dark?
9. X-rays are a form of what?
10. In what way are X-rays like visible light?
11. In what way are they different?
12. What did the telescope at Chilbolton use radio waves to study when it was first built?
13. What does it use radio waves to study nowadays?
14. What does it do differently with the radio waves nowadays?
15. If you go out at night with a torch, what bounces back off the object you see?
16. With the big dish what bounces back off the clouds and rain?
17. What is the brain of the big dish?
18. What’s the name for studying objects by bouncing radio waves off them?

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| Stories |
| See-through, coloured plastic |
| Radio universe |
| Lighting up the sky |
| How does sound travel? |
| Hidden starbirth |

1. What is colour science about?
2. What did Ben enjoy looking through as a boy?
3. Why do experiments need to be designed very carefully?
4. The big dish was designed to pick up radio signals from where?
5. Name two types of object in space that give out radio waves.
6. The big dish is much more what than a car aerial?
7. In what other way is it different from a car aerial?
8. What did a searchlight do?
9. What shape was a searchlight beam?
10. What is anything that makes a sound doing?
11. Often you can’t see this but what part of your body can sense it?
12. What do we call something that sound travels through?
13. What is a medium for sound made of?
14. When we ring a bell what vibrates inside the bell?
15. How do those vibrations get out of the bell?
16. How do they get to your ear?
17. Why can’t they see stars when they’re very young?
18. What kind of radiation does gas and dust give off when it’s heated?
19. Can humans see infrared radiation?
20. What do astronomers use to study space with infrared light?

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| Stories |
| Discs of different colour |
| Big eyes, loud cries |
| Beyond the rainbow |

1. What splits sunlight into many colours?
2. What do rainbows usually appear as?
3. Where can you see rainbows as full circles?
4. How do bush babies get their name?
5. What animals are they related to?
6. What do their large eyes give them?
7. Their ears are so sensitive that they can do what with them?
8. What are an insect’s eyes even better than ours at doing?
9. In science the colour of light can be matched to its what?
10. Which of the colours blue, green and red has the shortest wavelength?
11. What is a wavelength? (Hint: click on the word to see its definition.)
12. What kind of light can insects see that humans can’t?
13. What kind of light can some animals see that humans can’t?
14. What colours can Hugh’s instruments see?
15. Name three things Hugh can study using these instruments.

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| Stories |
| Bees buzz |
| Shiny shiny boots |
| Rainbow |

1. What kind of sound does the writer say that bees make?
2. The bee in the video makes a different buzz when she’s flying from when she’s doing what?
3. What do her wingbeats create in the air?
4. How do these get to your ear?
5. The buzz when she’s in a flower shakes the pollen; what else does it vibrate?
6. What do our ears tell us is the difference between the two types of buzz?
7. What special chemicals make football boots shine?
8. How do we normally see objects?
9. Why do leaves look green?
10. What do the shiny boots do besides just reflecting light?
11. What do the dyes in the boots change UV light to?
12. They look brighter because …?
13. In what way do raindrops act like a prism?
14. What is a prism? (Hint: click on the word to see the answer.)
15. What is the word for what happens to light when it enters a raindrop (or a piece of glass or plastic)?
16. The colours that make up white light are bent through a slightly different -----.
17. So that means the sunlight gets separated into what?

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| Stories |
| Light work |
| Incredible eyes |
| From a distance |
| Connected to your ear bones |

1. What does Hugh use light to learn about?
2. Light can get to our eyes by passing ------- an object.
3. Or it can get to our eyes by bouncing --- an object.
4. Which of these lets us see our toothbrush in the morning?
5. What word does Hugh use instead of ‘bounce’?
6. What word does he use for the different colours?
7. What happens to light when it passes through or bounces off an object?
8. What can studying the light from Mars tell us about?
9. Our eyes can see very small what between colours?
10. In what other way are our eyes better than our scientific instruments?
11. What is it called when scientists watch the Earth from above using instruments?
12. It works because light from the Sun does what?
13. Most people who use satellite pictures get them from which organisation?
14. What could we not do without remote sensing?
15. What does a sound make the little bones in your ear do?
16. What happens if one of those little bones breaks?
17. What has Prof Tanner been making to solve the problem?
18. Why did she have to develop a new material to do the job?
19. What has her work on these artificial bones achieved?