



SCIENCE B		WEEK 1					SCHEDULE
Date:	Day 1 ¹	Day 2 ²	Day 3 ³	Day 4 ⁴	Day 5 ⁵		
The Usborne World of Animals	pp. 6–7 ^N ¹	pp. 8–9	pp. 10–11				
Activity Sheet Questions	#1	#2–3	#4–5				
5-Day: Night Animals					pp. 3–9		
5-Day: Activity Sheet Questions					#7–9		
Optional: Do Together	Kids' Choice		The World Around You				
Discover and Do Level 1 DVD				Introduction to science with magnets Tracks #35–38			
Science Activities, Vol. 1				"What can a magnet do?" pp. 26–27			
Activity Sheet Questions				#6			
Supplies ^N ²	We provide: NSK—2 magnets, thumbtacks, paper clips, tape. You provide: Science Notebook ^N : sheets of paper tied with yarn or a spiral bound notebook or an artist's sketchbook (use for all experiments); assorted items (examples: jewelry, keys, coins, bottle caps, mug, scissors, foil, etc.); thread; paper; paints or crayons; large box.						
Shopping/Planning List	For next week: ruler, scissors, thread.						
Other Notes							

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1. The ^N symbol means there is an important note found in the notes section immediately following these schedule pages.
 2. When supplies are listed as "**We provide:**" they are materials found in either your Science B Supplies Kit (**BSK**) or the Non-Consumable Supplies Kit (**NSK**). When supplies are listed as "**You provide:**" they are materials you can generally find around your home.

Day 1

The Usborne World of Animals | pp. 6–7

The book says, “Earth is the only known planet to support living things.” Isn’t that amazing? Scientists known as astrobiologists attempt to find signs of life in space. While other planets have been discovered, the conditions necessary for them to support life would need to be finely-tuned in a number of ways for life to be able to survive in these worlds. Is earth just a lucky planet capable of sustaining life or is there a greater design involved? Although this documentary is too advanced for young children, you might want to take a look at the DVD *The Privileged Planet* (Illustra Media, 2004) to learn more about the idea that earth is finely-tuned in a number of ways to support life.

As the book points out, a basilisk lizard can run on water. But it can do so only because it doesn’t weigh much (from 2 grams up to about 7 ounces) and because it moves quickly. Because of this unique ability, these lizards have actually gotten the nickname Jesus lizards, referring to Jesus and his miracle of walking on water (Matthew 14: 25–31; John 6:16–21). By the way, after about 15 feet of running on water, a basilisk sinks and starts to swim, making it more of a Peter lizard than a Jesus lizard.

Activity Sheet Questions | #1

Your Activity Sheets might work more easily in a small binder for your children to keep and use as assigned. If you have more than one child using this program, extra sets of the Activity Sheets may be purchased for each child (Item #BSG1).

Optional: Do Together | Kid’s Choice

Each week throughout Science B, we will provide ideas for fun activities to do with your children. In general, we will try to make the activities actually “active”: performing additional research on a particular topic, playing a game, getting outside, or some other type of “hands-on” activity that seeks to apply what your children have been learning in a meaningful way.

Take our ideas for what they are—mere suggestions—and don’t feel enslaved to them. If your children don’t want to do a particular activity or have a different, better idea, by all means ditch ours and go with theirs!

Put this attitude into practice today by actively listening to your children. As they embark on their studies, what interests them most? What do they want to learn more about? What do they not have an interest in? Do they have any ideas for fun activities they could do that relate to what they’re learning about?

Make a list of their thoughts and ideas. Then let them pick one to do today. In this way, you will let them know that their opinion is important. Children who feel they have an important, active role in determining what they learn about will be more engaged in their studies. Have fun and treasure these times together.

Supplies

When supplies are listed as **We provide**, they are materials found in either your course-specific (**BSK**) supplies kit or the Non-Consumable (**NSK**) supplies kit. When supplies are listed as **You provide**, they are materials you can generally find around your home.

Science Notebook

Scientists keep diaries and journals. In these journals they record their theories, the procedures of their experiments, and their observations as their experiments progress. Their hope is that the results they observe will lead to new discoveries. Skills of observation and data collection are therefore fundamental to scientific research. These are important skills and habits for everyone to learn.

Help your children to learn this discipline by working with them to record their experiments and observations in their own personal Science Notebook.

You can either make your own notebook by tying together sheets of paper with yarn or use a spiral-bound notebook. I prefer to use the bound ruled notebooks that college students use because they are durable and stack so nicely on our bookshelves. Don’t worry about making it too complicated. Just provide a vehicle for recording drawings, questions, and observations. Make a special heading for each new experiment or field trip.

Perhaps someday when your children are grown and working as medical doctors keeping logs on their patients, or are researchers, keeping records of their experiments, you can smile to yourself and remember how you helped to get them started.

Day 2

The Usborne World of Animals | pp. 8–9**Activity Sheet Questions** | #2–3

Day 3

The Usborne World of Animals | pp. 10–11

What does the book mean when it says, “Only animals with well-developed wings can fly”? Do some animals have poorly developed wings? If so, which animals do the authors of the book have in mind? Do they think that if an ostrich or penguin had “well-developed wings” these flightless birds could fly? Maybe they should have just written, “Not all animals with wings can fly.”

The origins of flight is a persistent problem for non-theistic macroevolutionists, who not only have to explain flight as being the result of an undirected process despite its apparent complexity, but also must explain it for flying reptiles, birds, mammals (bats), and insects. Given all of the factors necessary for flight to succeed, it seems a stretch to claim that it came about in four different kinds of animals without any sort of intelligent direction whatsoever.

Activity Sheet Questions | #4–5

Optional: Do Together | The World Around You

Today, spend some time outside with your children. It’s always fun to “do school” outside. Your children will enjoy the change of pace and so will you!

As they begin their study of the wonderful world of animals, go on a tour around your yard and/or neighborhood. What animals do they see? Do you have any “hairy” animals nearby, such as dogs, cats, deer, raccoons, squirrels, badgers, etc.? What about feathered friends? How many different types of birds can your children spot? Don’t forget about the creepy crawlies! Can your children find any examples of insects, bugs, reptiles, and/or amphibians?

What do your children notice about the animals they see? Reinforce what they learned this week about how animals move. Did they see any animals that slithered? Ran? Swam? Flew?

As you begin this year’s Science studies together, be on the lookout for ways to reinforce what your children read about. Nearly every day, you will likely run across opportunities to discuss something your children see in the “real” world and connect it to something that they’ve read about in their books. When you homeschool your children, learning can—and often does—occur any time and anywhere. So be prepared and make the most of these moments when they present themselves. You never know when the most mundane of occurrences will reinforce an important lesson and help cement it in your children’s minds.

Day 4

Discover and Do Level 1 DVD | “Introduction to science with magnets” Tracks #35–38

We produced this fun and educational DVD so you and your children could watch “Professor Justin” perform each of the assigned experiments from *Science Activities, Vol. 1*. We recommend you gather your supplies, watch the DVD to see what to do, and then try each of these simple experiments yourself.

Or, if you prefer, you can do the experiment(s) on your own and then watch the DVD to see how it turned out on screen. You may want to mix and match to find out what works best. We hope this DVD makes your science experiments more enjoyable and more educational.

If your experiments don’t happen exactly as you see in the video, it’s OK! Watch the Outtakes in the Bonus section of the DVD and see how things didn’t always happen perfectly for us, either.

Note: Please navigate your *Discover & Do DVD* by using the DVD menu on your screen.

Science Activities, Volume 1 | “What can a magnet do?” pp. 26–27

Please take a moment to look over the notes on pages 46 and 47 of this book. They offer insights you and your children may find helpful as you work through the experiments. Similar notes for other sections of the book are found on pages 22–23 and 70–71.

Activity Sheet Questions | #6

Day 5

5-Day: Night Animals | pp. 3–9

5-Day: Activity Sheet Questions | #7–9 ■

Week 1 Activity Sheets

The Usborne World of Animals

Note: We have provided lines for dictation. Simply note your children's answers as you talk about each question.

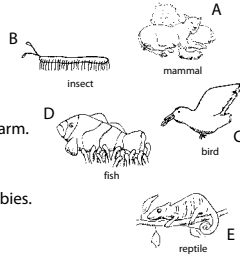
1. Where will you find the most animals living in one place? (p. 7)

- North America
- Deserts
- Antarctica
- Rainforests



2. Write the letter of the correct picture next to each statement that describes that kind of animal. (pp. 8-9)

- (E) All have dry, scaly skin.
- (C) All have feathers.
- (B) All have six or more legs.
- (A) All have hair or fur to keep warm.
- (C) All have wings.
- (A) Mothers feed milk to their babies.
- (C) All lay eggs.
- (D) All live in the water, at least some of the time.



Week 1 Activity Sheets

3. What fraction of all animals are bugs? Shade the picture of the Earth to show your answer.* (p. 9)



*Mom or Dad: If this is your children's first experience with fractions, you may want to talk through this question.

4. Match each creature to the way it moves. (pp. 10-11)

snake	uses tail to push through the water
flying squirrel	uses muscles to move body back and forth in an S shape
orca	squirts water backward to move forward
horse	moves diagonally opposite legs to walk
jellyfish	uses flaps of skin to glide through the air

Week 1 Activity Sheets

5. What are flying animals' bodies like? (Circle the best choices.) (p. 11)

Light **heavy** bodies,
strong **weak** muscles to power their
arms **wings.**

Science Activities, Volume 1

6. Draw a line to match each magnet to its name. (p. 26)

bar magnet
 horseshoe magnet
 button magnet

5-Day: Night Animals

7. Animals that are out at night are called... (p. 3)

- night owls
- nocturnal**
- nomads

Week 1 Activity Sheets

8. Why are some animals out at night? (pp. 4-5)

Some find more food at night; some aren't bothered by other creatures at night

9. Which features help animals live well in the dark? (pp. 6-8)

fur
 big eyes
 long arms
 moveable ears

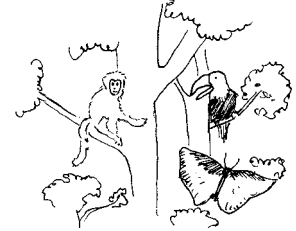


The Usborne World of Animals

Note: We have provided lines for dictation. Simply note your children's answers as you talk about each question.

1. Where will you find the most animals living in one place? (p. 7)

- | | | | |
|--------------------------|---------------|--------------------------|-------------|
| <input type="checkbox"/> | North America | <input type="checkbox"/> | Deserts |
| <input type="checkbox"/> | Antarctica | <input type="checkbox"/> | Rainforests |



2. Write the letter of the correct picture next to each statement that describes that kind of animal. (pp. 8–9)

_____ All have dry, scaly skin.

_____ All have feathers.

_____ All have six or more legs.

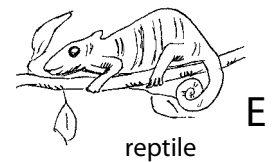
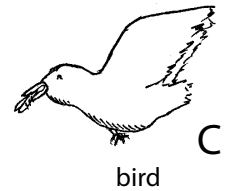
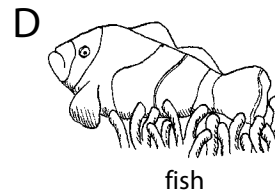
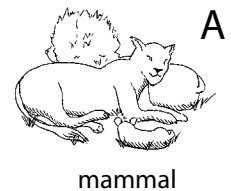
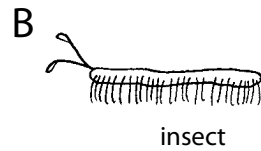
_____ All have hair or fur to keep warm.

_____ All have wings.

_____ Mothers feed milk to their babies.

_____ All lay eggs.

_____ All live in the water, at least some of the time.





3. What fraction of all animals are bugs? Shade the picture of the Earth to show your answer.* (p. 9)



*Mom or Dad: If this is your children's first experience with fractions, you may want to talk through this question.

4. Match each creature to the way it moves. (pp. 10–11)



snake

.

.

uses tail to push through the water



flying squirrel

.

.

uses muscles to move body back and forth in an S shape



orca

.

.

squirts water backward to move forward



horse

.

.

moves diagonally opposite legs to walk



jellyfish

.

.

uses flaps of skin to glide through the air



5. What are flying animals' bodies like? (Circle the best choices.) (p. 11)



Light

heavy

bodies,

strong

weak

muscles to power their

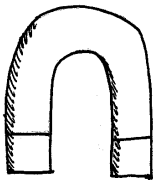


arms

wings.

Science Activities, Volume 1

6. Draw a line to match each magnet to its name. (p. 26)



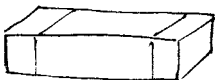
•

• bar magnet



•

• horseshoe magnet



•

• button magnet

5-Day: Night Animals

7. Animals that are out at night are called... (p. 3)

night owls

nocturnal

nomads



8. Why are some animals out at night? (pp. 4–5)

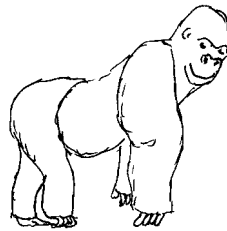
9. Which features help animals live well in the dark? (pp. 6–8)



fur



big eyes



long arms



moveable ears



SCIENCE B		WEEK 18					SCHEDULE
Date:	Day 1 ⁸⁶	Day 2 ⁸⁷	Day 3 ⁸⁸	Day 4 ⁸⁹	Day 5 ⁹⁰		
<i>First Encyclopedia of the Human Body</i>	pp. 4–5	pp. 6–7	pp. 8–9				
Activity Sheet Questions	#1–2	#3–5	#6–8				
5-Day: What Makes You Ill?					pp. 2–3		
5-Day: Activity Sheet Questions					#10–12		
Optional: Do Together	Your Amazing Body!		Seeing is Believing				
<i>Discover and Do Level 1 DVD</i>				Tracks #82–83			
<i>Science Activities, Vol. 1</i>				"Making Pictures" pp. 64–65			
Activity Sheet Questions				#9			
Supplies	We provide: NSK—tape, pin; BSK—tracing paper. You provide: cardboard box such as a shoe box (optional: black paint, paintbrush), scissors, dark cloth the size of a large bath towel.						
Shopping/Planning List	For next week: assorted items: powdered soap, sand, salt, flour, sugar, shampoo, cooking oil, orange juice, jelly, clear jar or glasses or bowls, spoons, water, paper towels, saltwater, saucer, funnel (optional).						
Other Notes							

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Day 1

First Encyclopedia of the Human Body | pp. 4–5

The human body is described as, “an amazingly complicated machine.” Scripture says God designed us so that we are “fearfully and wonderfully made” (Psalm 139:14). Isn’t it interesting that even secular books admit that human beings are “amazingly complicated,” yet their explanation for this complexity is that it all happened by chance over a long period of time? But the more one learns about life and all the little details that need to happen to make things work just right, the more we should be in awe of God as a marvelous Creator. [p. 4]

Activity Sheet Questions | #1–2

Optional: Do Together | Your Amazing Body!

As your children embark on their study of the amazing human body, take some time today to talk with them about their bodies. What do they like? What do they wish was different? What do they want to learn more about?

Use this time to have a frank discussion with them about the importance of keeping their bodies clean and healthy. What types of things can they do to keep their bodies in tip-top shape? Discuss with your children the importance of bathing regularly and getting plenty of exercise.

Also discuss how important it is to feed their bodies the right amounts of the right types of foods. What role does water play in how the body functions? What other things can/should your children do to ensure that their bodies are functioning optimally?

Day 2

First Encyclopedia of the Human Body | pp. 6–7

Is there a difference between the brain and the mind? Some people think so, viewing the brain as a physical organ and the mind as an immaterial part of our being. When Jesus told his followers to love God with all their “mind” (Matthew 22:37), he used the Greek word *dianoia*, meaning the thinking and understanding part of our inner being. [p. 6]

Activity Sheet Questions | #3–5

Day 3

First Encyclopedia of the Human Body | pp. 8–9

The human eye is incredible. Even Charles Darwin wrote in *The Origin of Species*, “To suppose that the eye with all its inimitable contrivances for adjusting the focus to different distances, for admitting different amounts of light, and for the correction of spherical and chromatic aberration,

could have been formed by natural selection, seems, I freely confess, absurd in the highest degree” (Chapter VI, Difficulties of the Theory). Yet Darwin proceeds to try and explain how the human eye could have evolved over time by chance rather than by God’s design. [p. 8]

Activity Sheet Questions | #6–8

Optional: Do Together | Seeing is Believing

Too often, we take for granted all five of our senses and how they work together to produce the experience that we daily call “life.” Only when one of those senses is compromised do we realize how important it is.

Today, talk with your children about their five senses. What would it be like if they could not see? Hear? Feel? Smell? Taste? What would it be like to live in a dark hole underground like a mole?

Have them try out what it would be like to live for a while without sight. Blindfold them with a headband or kerchief, and then ask them to identify various things, using only their ears, hands, nose, or tongue. Feel free to use foods (cold spaghetti, grapes), everyday objects (remote control, fork), as well as some strange objects they’re not used to interacting with everyday (go to the garage for items such as a broom or an oil pan).

Day 4

Discover and Do Level 1 DVD | Tracks #82–83

Science Activities, Volume 1 | “Making Pictures”
pp. 64–65

Pinhole camera: Painting the inside of the box will improve the image quality, but this is optional. Use tape to darken any open spaces in the box. The darker the inside of the box, the better. If the pinhole does not provide an image, enlarge it slightly until you get a “picture.” The “picture” will not be like a photograph. It may only appear as a fuzzy upside-down image.

Activity Sheet Questions | #9

Day 5

5-Day: What Makes You Ill? | pp. 2–3

Activity Sheet Questions | #10–12 ■


Week 18 Activity Sheets


First Encyclopedia of the Human Body


1. The little tiny pieces that make up your body are called... (p. 4)

 (*cells*)


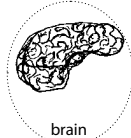


2. What three things does your body need to live? (p. 5)

 1) _____ (*food*)

 2) _____ (*water*)

 3) _____ (*air*)

3. Which organ controls all of your body systems? Circle it. (p. 6)


 heart  brain  stomach  liver

Animals, Astronomy, and Physics | Week 18 | Student Activity Sheets 81

Week 18 Activity Sheets

4. What body part carries messages from your brain to the rest of your body? (p. 6)

 (*nerves*)



5. True or False: The brain sleeps at night. (p. 6)

True **False**

If not, what else does it do? (Put an X by all that are true. We have completed one answer for you.)


throws a party

keeps heart beating



keeps lungs working

helps you talk to people

keeps digestion working



6. Circle the eye that is looking at something in a dark room. (p. 8)
 Draw a star by the eye looking at something in the bright sunshine.

82 Student Activity Sheets | Week 18 | Animals, Astronomy, and Physics


Week 18 Activity Sheets

7. Why did God give you eyelashes and eyelids? (p. 9)

 (*to protect your eyes and keep them clean*)

8. Why can't you tell crayons apart when there isn't much light? (p. 9)


 (*because the part of your eyes that see color don't work very well when there isn't much light*)



Science Activities, Volume 1

9. Why don't things we see look like they are upside down? (p. 65)


 (*because our brain turns them right side up for us*)



5-Day: What Makes You Ill?

10. What is a symptom? (p. 2)

 (*A symptom is when your body doesn't feel right, and could be your body telling you something is wrong.*)



Animals, Astronomy, and Physics | Week 18 | Student Activity Sheets 83


Week 18 Activity Sheets

11. Give an example of a symptom. (p. 2)

 (*Possible: tummy ache; sore throat; runny nose; fever*)

12. How is pain a good thing? (p. 3)

 (*pain lets you know something is wrong.*)



84 Student Activity Sheets | Week 18 | Animals, Astronomy, and Physics



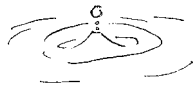
First Encyclopedia of the Human Body

1. The little tiny pieces that make up your body are called... (p. 4)

2. What three things does your body need to live? (p. 5)



1) _____

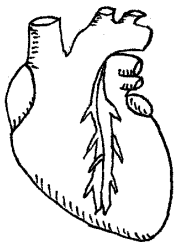


2) _____

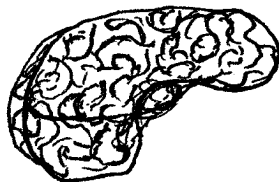


3) _____

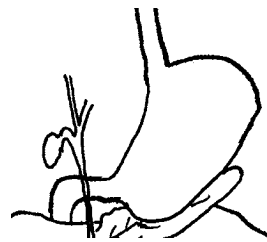
3. Which organ controls all of your body systems? Circle it. (p. 6)



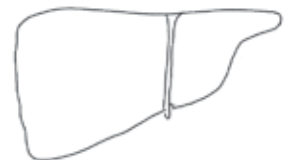
heart



brain



stomach



liver



Date:	Day 1 <small>176</small>	Day 2 <small>177</small>	Day 3 <small>178</small>	Day 4 <small>179</small>	Day 5 <small>180</small>
Space	pp. 40–41	pp. 42–43	pp. 44–45		
Activity Sheet Questions	#1–2	#3–4			
5-Day: See How It's Made					pp. 92–93
5-Day: Activity Sheet Questions					#5
Optional: Do Together	Future Possibilities...or Science Fiction?			Favorite Activity	
Discover and Do Level 1 DVD				Tracks #91–92, Conclusion	
Science Activities, Vol. 1				"Fun with Light and Mirrors" p. 72	
Supplies	We provide: NSK—mirror, tape. You provide: thin cardboard or index card, crayons, sheet of paper, book.				

Other Notes

You're All Done!

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Day 1

Space | pp. 40–41

Activity Sheet Questions | #1–2

Optional: Do Together | Future Possibilities ... or Science Fiction?

Today, let your children pick out a science fiction movie to watch together. Do they enjoy *Star Wars*? *Star Trek*? *Battlestar Galactica*? Something else?

Enjoy the “break” from serious astronomy study, but use the time as an opportunity to discuss what’s possible and what’s truly fiction in the movie, based upon what they’ve learned about space so far.

Could the Millennium Falcon really travel that fast? Do aliens really exist on other planets? Could humans really live and survive as they do in the movies? Why or why not? Let them know it’s OK to assume that technology will progress rapidly in the future. But, based upon what they’ve learned so far, what things are a bit too much of a stretch to believe? Have fun watching them try to discern potential truth from true science fiction!

Day 2

Space | pp. 42–43


How do astronauts “grow about 2 inches taller when they are in space”? It’s true that in space people are taller, but when they return to earth they are their old size again. What’s going on in space?

Our spine is made up of vertebrae. When people are in space, the vertebrae spread out more, making people taller. There are at least two different theories as to how this happens to humans in space. One theory says that our spine gets longer in space because the usual amount of gravity pressing on us is not around in space, allowing our spine to be longer. Another theory says that in space the discs between each vertebrae can hold more fluid, making them larger and thus making the spine longer. Whatever the case may be, if your children get to be astronauts, they will also get to be taller—at least while they’re in space!

Activity Sheet Questions | #3–4

Day 3

Space | pp. 44–45

The Arecibo Radio Telescope, operated by Cornell University, is located in Puerto Rico. The dish is 1,000 feet in diameter, 167 feet deep, and covers about 20 acres. You can learn more about it by visiting our IG links page .

The “Talking to aliens” section notes that scientists have sent messages to space “to try and make contact with alien beings.” Are human beings the only form of intelligent life in the universe or are there intelligent aliens? We don’t know. If there are aliens, they are also part of God’s creation. Christian scholar C. S. Lewis (1898–1963) suggested that maybe the reason Earth is so far away from other planets and galaxies is because we are under a sort of quarantine. As a fallen planet, said Lewis, maybe God doesn’t want us infecting other parts of His universe!

Day 4

Optional: Do Together | Favorite Activity

Today, let your children wrap up the year by choosing one activity to do from anything you’ve done together this year. It doesn’t have to be related to anything they’ve read this week. Just ask them to think back about all you’ve done together this year.

What did they enjoy the most? What would they really like to do again? Indulge their preferences and have fun repeating their favorite activity from this year. We hope you and they had fun!

Discover and Do Level 1 DVD | #91–92, Conclusion

Science Activities, Volume 1 | “Fun with Light and Mirrors” p. 72

Day 5


5-Day: See How It’s Made | pp. 92–93

5-Day: Activity Sheet Questions | #5 ■

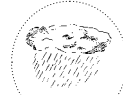
Week 36 Activity Sheets

Space

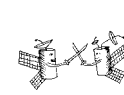
1. **Challenge!** What can satellites do? Circle three more. (p. 41)




make maps




check weather



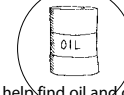
fight each other




beam TV signals




greet aliens



help find oil and gas




wash dishes



read books

2. What is a Space shuttle able to do that rockets are not able to do? (p. 41)



(it can travel to space and return to Earth more than once)

3. **Challenge!** Why do you think people grow about 2 inches taller when they are in Space? (p. 42)

(without gravity pulling on them, their bodies can stretch out a little bit—they are no longer compressed)

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Week 36 Activity Sheets

4. What if your house suddenly didn't have gravity? What objects might have to be installed differently? What activities might you have to tackle in another way? (pp. 42–43)

(Possible: many things would need to be bolted down; couldn't wash dishes in the sink; the couch would need seat belts, etc.)

5-Day: See How It's Made

5. Review: Draw a line to match each term to the correct definition. (pp. 92–93)

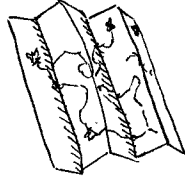
bar code				to preserve by drying or smoking
cure				to bring something to a high temperature in order to kill germs
homogenize				parallel lines printed on packaging that a computer can use to look up information
pasteurize				to reuse something to reduce waste
recycle				to make the particles in something smaller and evenly distributed

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Space

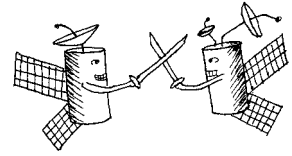
1. **Challenge!** What can satellites do? Circle three more. (p. 41)



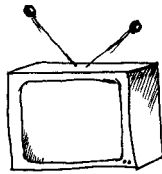
make maps



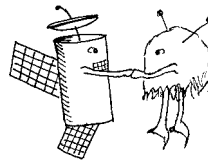
check weather



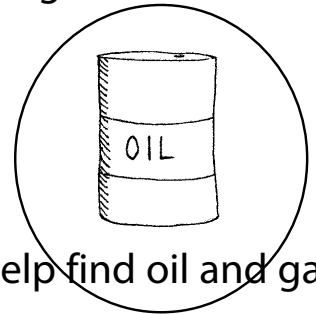
fight each other



beam TV signals



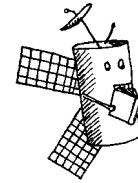
greet aliens



help find oil and gas

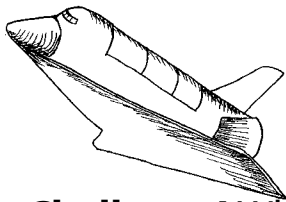


wash dishes



read books

2. What is a Space shuttle able to do that rockets are not able to do? (p. 41)

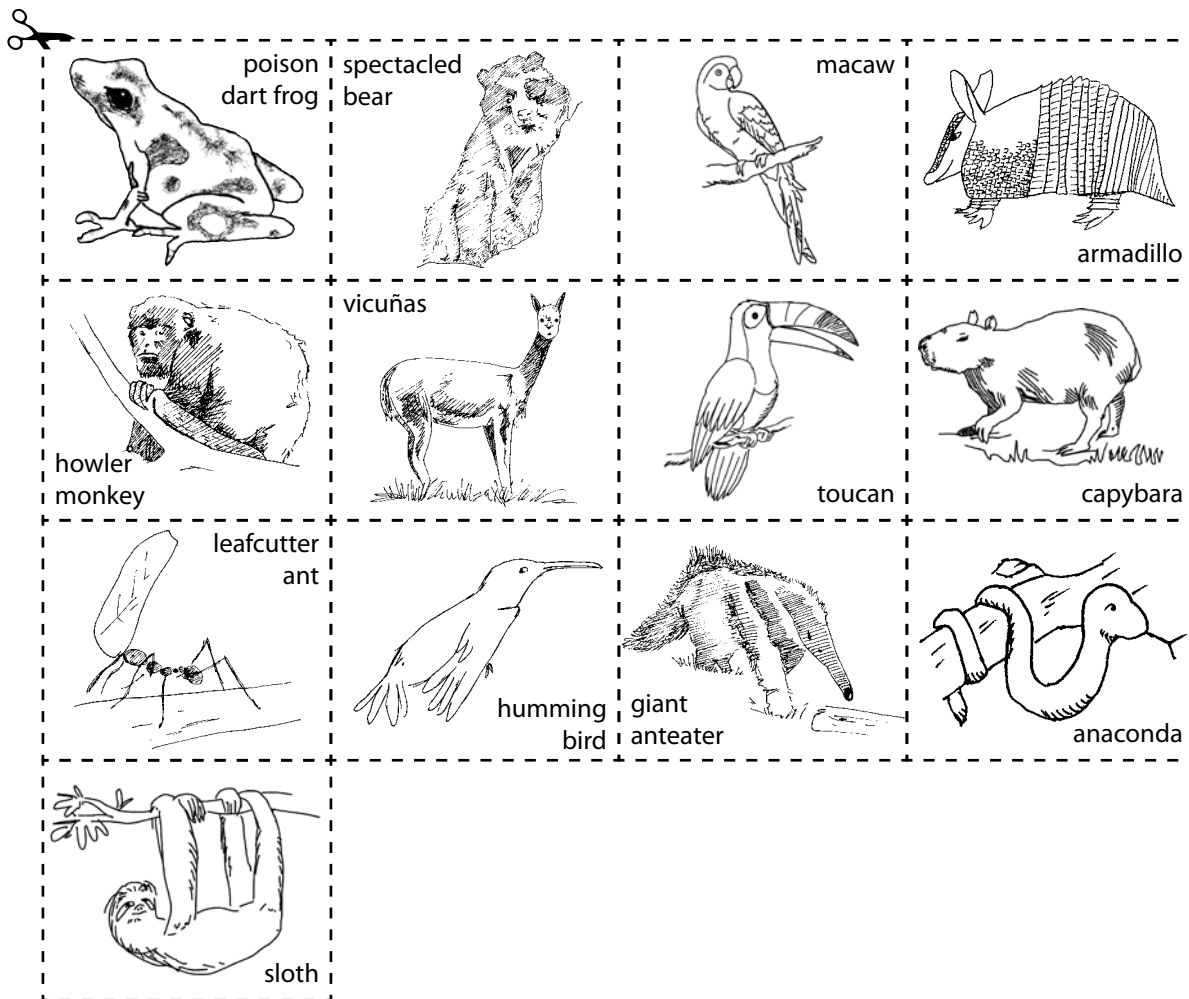


3. **Challenge!** Why do you think people grow about 2 inches taller when they are in Space? (p. 42)

Appendix 4: Cut-Out Sheets

The Usborne World of Animals

Cut-Outs for South America: Featured Creatures (#1)



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Cut-Outs for North America: Featured Creatures (#2)

