

Grade 6			
Ch. 2 Lesson 1			
Life Science			
Page #	Question	Answer(s)	Links/Sources
47	How do cells demonstrate God's wisdom and design?	Sample answer. The intricate detail, design, and the function built into each tiny cell.	
47	What are some things around your classroom that could be used to magnify?	Sample answer: Magnifying lens, microscopes, digital devices.	
48	What do you think the tiny empty boxes that Hooke described were?	*The lines indicate where the cell walls were located.	
48	How long did it take to develop the cell theory	*It took more than 200 years.	
48	Why do you think Hooke described cells the way he did?	*Hooke described the cork as empty rooms because the cells were dead and the organelles were not present. He named the open space based on the rooms that monks lived in at a monastery	
48	How were cells discovered?	Sample answer: By using primitive magnifying glass.	
48	If you observed what Hooke saw, what conclusions would you make?	Sample answer: I would have concluded that the cork is made from hollow structures.	
48	What do you think he expected to see?	Sample answer: I think he expected to see that the cork was made out of smaller things, but I don't think he expected to see the tiny cells that he saw.	
48	Why do you think so many scientists thought there were smaller things to see?	Sample answer: Scientists had learned that many things were made of smaller parts, the expected that there were still smaller things that made things up but they could not see them because they were too small.	
48	How would a microscope help them with their theories?	Sample answer: The microscope would magnify things so that if things were made of smaller things they would be able to see them.	
49	How does sugar affect osmosis?	Sample answer: It will cause water to move from the potato into the salt water solution to dilute it.	

49	How will the substances get inside the egg?	Sample answer: Through the membrane (semi-permeable membrane) that surrounds it.	
50	What parts of the cell theory did these scientists contribute?	*Sample answer: Students may restate the findings from the chart on the facing page; each contribution added something new to the theory to help explain it further.	
50	Which part of the verse makes you think of tiny things that can only be seen by a microscope?	*The "invisible things" mentioned in Colossians 1:16 might remind us of microscopic things.	
50	Why do you think the artist chose to paint him with this piece of equipment?	*It represents a key historic moment in which the scientist established a basic principle that living things come from other living things.	
50	How did Pasteur's work help the cell theory?	*By using a sealed container, he proved that life does not arise spontaneously, but from other things.	
50	Why was this an important discovery?	Sample answer: It showed that living things only come from other living things.	
50	What else have we learned about the cell since the work of these early scientists?	Sample answer: We have learned many things about cell structures, their functions, how they reproduce and how genetic information is passed to new cells from parent cells.	
51	How many sides does the number cube have?	*6	
51	How many even numbers are on the cube?	*3	
51	What is the probability of rolling an even number?	*3 out of 6 (3/6, 1/2, or 50%)	
51	What is the probability of rolling two fives?	*Rolling two dice will give 36 possible outcomes, with one of these being double fives. So, the probability is 1 out 36 (1/36).	
51	How might these observations have contributed to the belief that life comes from an intelligent, higher being?	*Sample answer: Seeing small details and life processes in organisms too small to be seen with the unaided eye may have contributed to some people's belief in a Creator of all things.	
51	Where did the very first cell come from?	Sample answer: It was created by God.	
51	How is abiogenesis like spontaneous generation?	Sample answer: Both theories suggest that living things come from non-living things.	
52	What does having many cells provide?	*It allows cells to be specialized and work together to perform different jobs.	

52	How do materials move in and out of the cells?	*Materials move from an area of high concentration to an area of low concentration. The food coloring was in high concentration when first dropped into the water. The coloring spread to areas of lower coloring until there was a balance.	
52	If a bird egg is unicellular how does it become a multicellular thing?	Sample answers: the cell in the egg divides over and over producing more cells which divide and specialize.	
53	What might happen if the cell membrane became damaged?	*The things inside the cell might spill out into the environment and the cell would die or harmful elements in the environment might enter the cell.	
53	What is this structure?	The nucleus	
53	How might the decisions you make as a Christian be like the activities of the cell membrane?	*As Christians we need to be careful what we take in through our five senses. We should take in lots of positive, uplifting things and avoid negative and unholy things. If students don't come up with it on their own, remind them that spending time alone with God every day is a way to stock up on the good stuff.	
53	What is the gelatinous material inside the cell?	*Cytoplasm	-
53	Explain the concept of spontaneous generation.	*Nonliving things could give rise to living things.	
53	How did scientists disprove the theory of spontaneous generation?	*Observation proved that living things do not appear from nonliving but come from other living things.	
54	How will a membrane affect the movement of iodine tincture and starch solution?	Sample answer: The nucleus (genes).	
54	What happens when onions are cooking in the kitchen?	The molecules that have an odor escape and spread out into the surrounding air until they are evenly dispersed.	
54	What happens not long after have watered a wilted plant? Why?	The water fills the cells of the stem and leaves and the plant no longer looks wilted.	
54	What determines the direction water moves by osmosis?	*The area of concentration.	

55	Do these processes provide evidence that they were designed or that they developed by chance?	Sample answer: The process are intricate and well-design indicating that they were thoughtfully designed.	
	* Means the answer is found in the TE.		