

Physical

Life

Earth and Space

**LESSON 50****Identifying the joints and their functions*****Lesson Preparation******Program Materials***

- Science Word List E
- Lesson Review 50

***Tool Kit Materials***

- X-rays of the human body (see *Before the Lesson*)
- Resource book *Your Insides* (see *Before the Lesson*)

***Collected Materials***

- Self-stick tag (see *Before the Lesson*)

***Before the Lesson***

- The x-rays needed for the lesson are the chest, left and right hands, left foot, skull, and knee. Keep each backing paper behind its x-ray.
- Put a self-stick tag on the first page of “Joints Let You Bend” in the resource book *Your Insides*.

***The Lesson***

**“In your last science lesson, you learned the names of some of your bones.”**

**“What do you call all the bones together that form your body?”**  
*skeleton*

**“Do you remember how many bones are in a human being’s skeleton?”** 206

**“Where is the largest bone located?”** *upper leg*

**“What is it called?”** *femur*

**“Point to your femur.”**

**“The bones in your head make up your skull.”**

**“What do we call the bones in your skull that protect your brain?”**  
*cranium*

**"Point to your cranium."**

**"Which bone in your skull moves when you eat and talk?"** *mandible*

**"Point to your mandible."**

**"Where is the smallest bone in your body?"** *inside your ear*

**"What is it called?"** *stapes (stā'pēz)*

- Show your child the x-ray of a chest.

**"This is an x-ray of a part of a human body."**

**"An x-ray is a photograph that allows you to see the bones in your body."**

**"What bones do you think this x-ray shows?"** *ribs, spine (vertebrae)*

- Repeat with the x-ray of the right hand, left foot, and skull.

**"Today you will learn about joints."**

**"The place where two or more bones meet is called a joint."**

**"Joints allow your body to bend, turn, and twist."**

- **Teacher Note:** The body of an adult human contains more than 100 joints. Knuckles, wrists, and shoulders are examples of freely moveable joints. The joints between the eight bones that make up the cranium are fixed joints. Fixed joints are immovable. The vertebrae are examples of slightly moveable joints.

**"Bend your arm at your elbow."**

**"The joint at your elbow allows you to bend your arm."**

**"Move your fingers and wrist."**

**"The joints between the many bones in your fingers and wrist allow you to bend, turn, and twist them."**

**"Make a large circle with your arm."**

**"The joint between the bones in your arm and your shoulder allows you to turn your arm like this."**

**"Bend over and touch your toes."**

**"The joints between the 33 vertebrae in your spine allow you to bend your back."**

**"What other parts of your body have joints that allow you to bend, twist, or turn?"** *knees, feet, toes, hips*

- Ask your child to identify other areas of his/her body where there is a joint.

**“Let’s look at another x-ray.”**

- Show your child the x-ray of a knee.

**“The space between the bones is the joint.”**

- Point to the joint in the x-ray.

**“The joint allows you to bend your leg.”**

**“Let’s look at another x-ray.”**

- Show your child the x-ray showing the left hand.
- **Teacher Note:** The bones shown in this x-ray are the eight carpals in the wrist, the five metacarpals in the hand, and the 14 phalanges in the fingers.

**“What part of the body do you think this x-ray shows?”** *the hand*

**“The spaces between the bones are the joints.”**

**“The joints allow you to bend your wrist and fingers.”**

**“Point to a joint in this x-ray.”**

- Ask your child to point to 3–4 joints in the x-ray.
- **Teacher Note:** Ligaments are connective tissues that hold bones together at joints. Pads of cartilage cushion the ends of the bones of a joint. This allows a joint to withstand great pressure and stress.

**“I have a book that will help you learn more about your body.”**

- Show your child the cover of the book *Your Insides*.

**“The title of this book is *Your Insides*.”**

**“Let’s read what this book has to say about joints.”**

**“The title of these two pages is ‘Joints Let You Bend.’”**

- Read each section of the two pages on joints. Pause after each passage to show your child the illustrations.

**“What new word do you think I will write on the science word list?”**  
*joints*

- Write the word joints on Science Word List E.


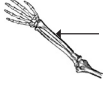
**“What is something you learned in today’s science lesson?”**

**“In your next science lesson, you will learn about muscles.”**

- **Optional:** Help your child to use the x-rays to assemble a model of the human body.

## Lesson Review

- **Note:** Lesson reviews may be completed on the same day the lesson is taught or on the following day.
- Hand Lesson Review 50 to your child.
- Read the directions and questions one at a time to your child. Allow time for your child to answer each question before continuing.
- Correct your child's paper. Review incorrect answers with your child.

Name _____ Answer Key _____	Lesson Review 50 Science 1 Lesson 50	
<b>Your Joints</b>		
Fill in the circle next to the correct answer.		
1. Why are the joints in your body important?		
<input checked="" type="radio"/> A Joints help you bend, turn, and twist. <input type="radio"/> B Joints protect your brain. <input type="radio"/> C Joints keep your body stiff.		
2. Which joint helps you throw a ball?		
<input type="radio"/> A femur <input type="radio"/> B mandible <input checked="" type="radio"/> C elbow		
<b>Look Back</b>		
3. Circle the picture showing a person's spine.		
		
4. Circle the word that names something inside your body.		
twigs	<input checked="" type="radio"/> blood	roots
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