



by  
Ask a Tech Teacher

# **4 STEM Lesson Plans**

*Engineering/Design  
The Human Body  
Keyboarding and the Scientific  
Method  
Robotics*

# 4 STEM LESSON PLANS

**Engineering and Design**

**The Human Body**

**Keyboarding and the Scientific Method**

**Robotics**

***Ask a Tech Teacher™***

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# Human Body

## Essential Question

*How can a form I fill out help me remember information?*

## Big Idea

*Typing helps me to remember what I'm studying*

## Teacher Preparation

- Decide whether this is practice or assessment.
- Talk with grade level team so you use the same terminology they do (i.e., is it 'jawbone' or 'mandible?').
- Place human body template where students can access it.
- Have list of human body websites on internet start page.

## Assessment Strategies

- Followed directions
- Completed project
- Worked well with a partner
- Joined class conversations
- [tried to] solve own problems
- Higher order thinking: analysis, evaluation, synthesis

## Steps

**Time required:** 45 minutes

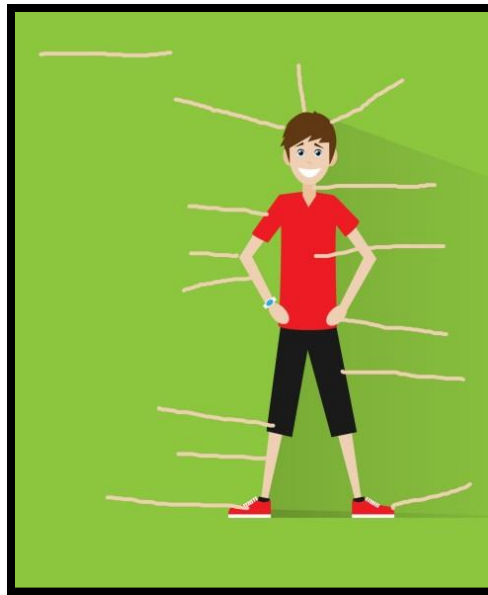
**Suggested grade:** Grades 2-5

\_\_\_\_\_ For this lesson, students will label templates of the human body, or alternatively a life cycle, parts of a story, or anything else being studied in class.

\_\_\_\_\_ After discussing with the grade level team, introduce the unit you will be supporting. For the human body, start with [this BrainPop video](#) and answer questions at the end as a group. If you don't have a subscription to BrainPop, try these [human body websites](#).

\_\_\_\_\_ This lesson provides three approaches to supporting inquiry:

- *fill-in-the-blank template*
- *label student picture*
- *label an avatar*



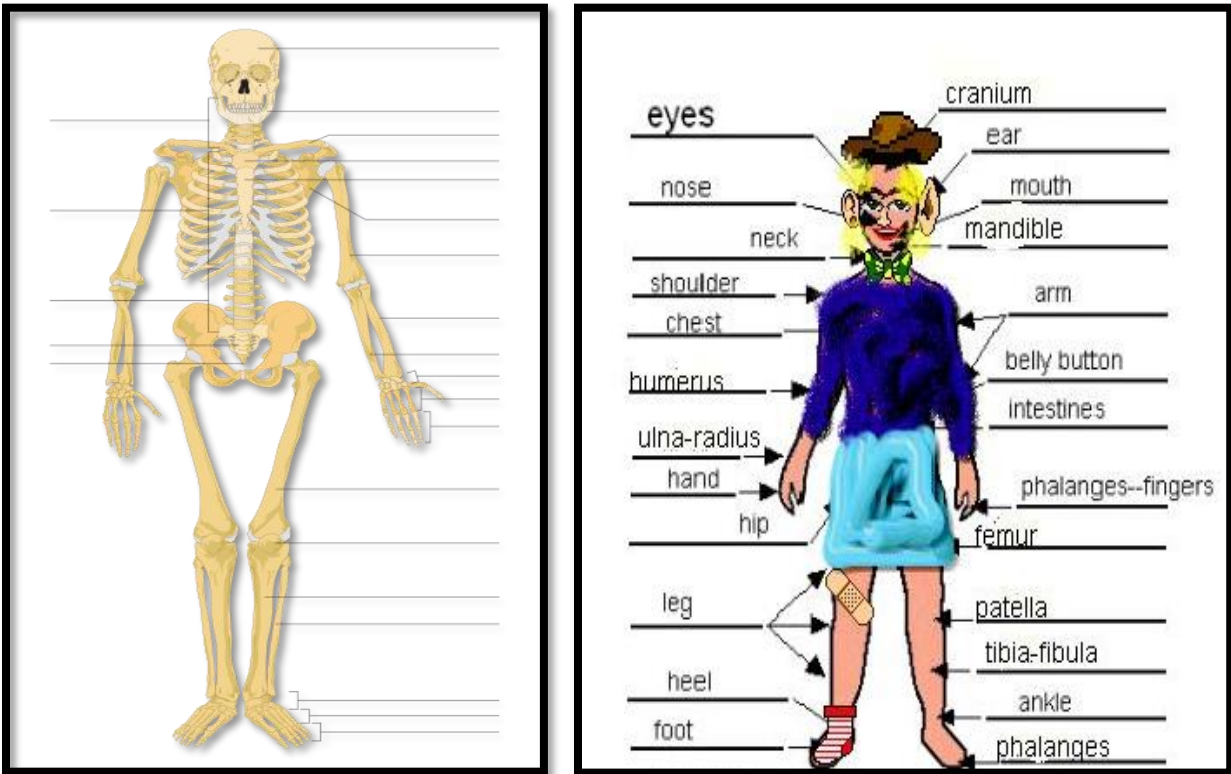
## Fill-in-the-blank Template

\_\_\_\_\_ Providing a digital worksheet helps students remember information in two ways:

- *they type it*
- *they read what they type*

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Figure 1a-b: Fill in the blank templates of human body



\_\_\_\_\_ If you have desktop computers, you might use KidPix, Paint, or Google Draw. You can even use a word processing program like Google Docs or MS Word.

\_\_\_\_\_ If you're a Chromebook school, try these:

- [ABCYa Paint](#)
- [SumoPaint](#)

\_\_\_\_\_ If you're an iPad school, try one of these:

- [Screenchomp](#)
- [Drawp](#)

\_\_\_\_\_ For most digital devices, you can supply the template as a PDF or JPG (or another image file) to students and they can fill in the blanks using the annotation tool supplied with the digital device.

\_\_\_\_\_ Alternatively, students may annotate a screenshot of the worksheet and then save it to their digital portfolio. Depending upon your digital device, the screenshot tool will be:

- **Windows:** *the Snipping Tool*
- **Chromebook:** *hold down the control key and press the window switcher key*
- **Mac:** *Command Shift 3 for a full screenshot and Command Shift 4 for a partial*
- **Surface tablet:** *hold down volume and Windows button at the same time*
- **iPad:** *hold Home button and power button at same time*

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- **Online:** a screenshot tool like Jing or Snagit

\_\_\_\_\_ Demonstrate how to complete worksheet:

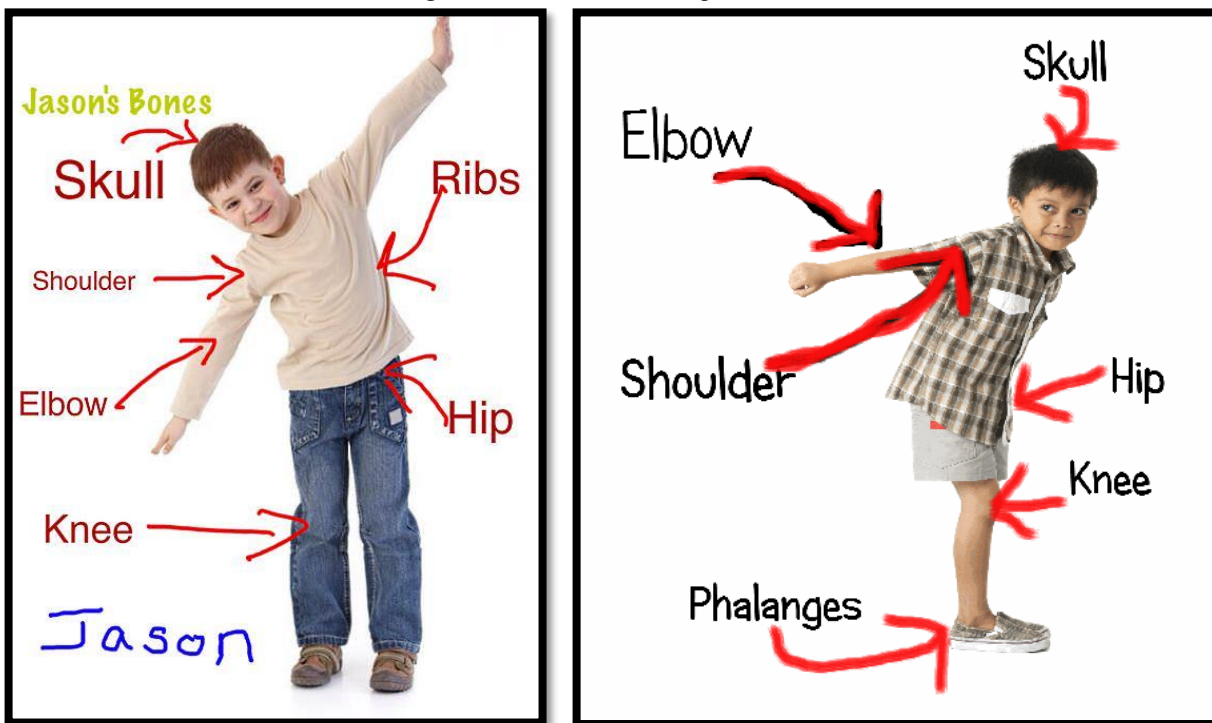
- Open the class drawing program that allows students to write on an imported file.
- Demonstrate how to find the required template and bring it into the program.
- Fill in blanks with student collaboration on class screen. Use body part words from class. For example, if they say 'jaw' in class, don't put 'mandible', and vice versa.
- Show students how to resize and move text box to align on worksheet.
- Decorate with paint bucket, paint brush, stamps, or whatever tools are available in your program.

\_\_\_\_\_ Now students complete theirs. Display blank sample or completed sample on class screen as a reference but expect students to come up with as many parts as possible on their own—without peaking.

\_\_\_\_\_ Those who finish early can format the picture with stickers, stamps, or other widgets are available on the digital program you select (*Figure 3b*).

### Label Student Picture

*Figure 2a-b—Label student picture*

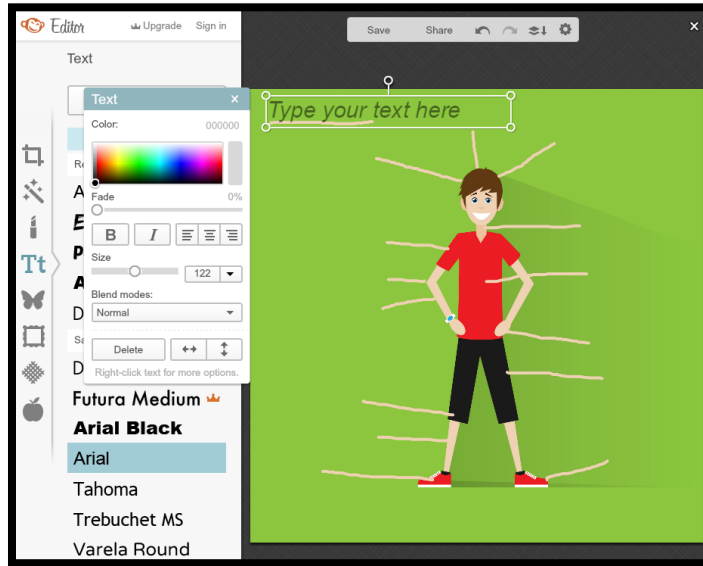


\_\_\_\_\_ Have students help each other take their pictures with the iPad camera. Then, use an iPad app like [Doodle Buddy](#) to label parts using a brush and/or text tools. *Figures 4a-b* are examples.

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\_\_\_\_\_ **Alternatively:** Students can open their picture in Google Draw and annotate via a program like [PicMonkey](#) (Figure 5):

Figure 3—Mashup of Google Draw and PicMonkey



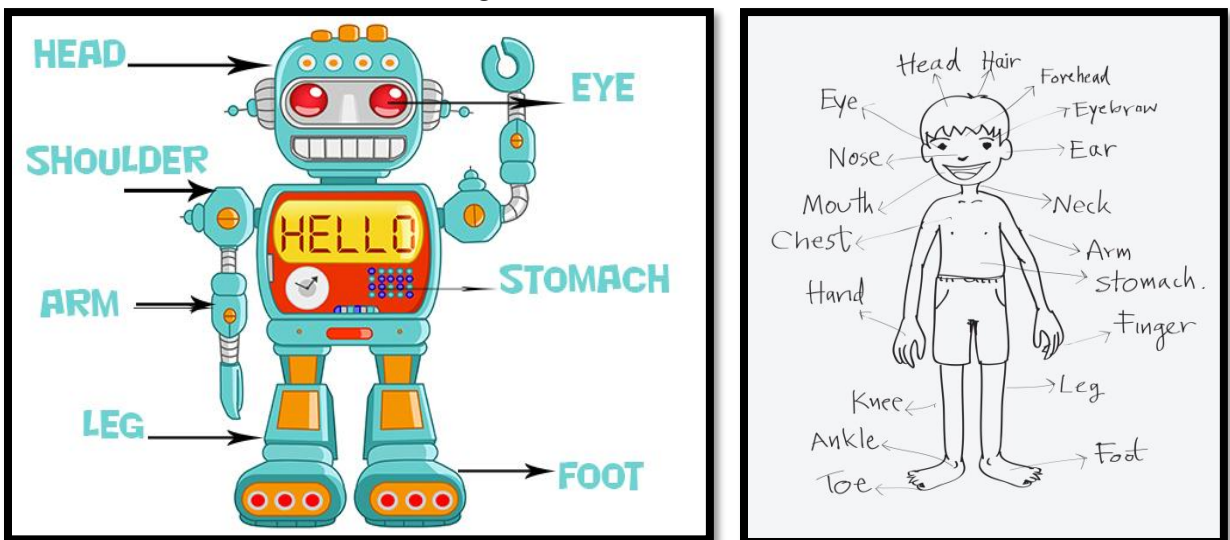
\_\_\_\_\_ **Alternatively:** Draw a full-body picture of themselves and label that.

### Label an Avatar as Though It is Human

\_\_\_\_\_ This is a great approach to circle back on digital citizenship and the importance of privacy on the internet. Why are avatars a good personal representation rather than a photograph?

\_\_\_\_\_ Students can either draw an avatar or select one they've used before. Load the avatar onto the computer, Chromebook, or iPad. Figures 6a-b are examples:

Figure 4a-b—Label avatar bodies



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\_\_\_\_\_ Use the digital device's annotation tool to fill in the body parts.

\_\_\_\_\_ When done, export/save/publish/share/print without assistance, as is the custom in your school.

### Differentiation

- *If this is NOT a formative/summative assessment, students can work in pairs.*
- *Done? Visit [Human Body](#) websites.*

# Intentionally Deleted