

A photograph of two young women with long hair and glasses, smiling and looking at a tablet together. The woman on the left is wearing a light blue patterned top, and the woman on the right is wearing a dark top. The background is a solid brown color.

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

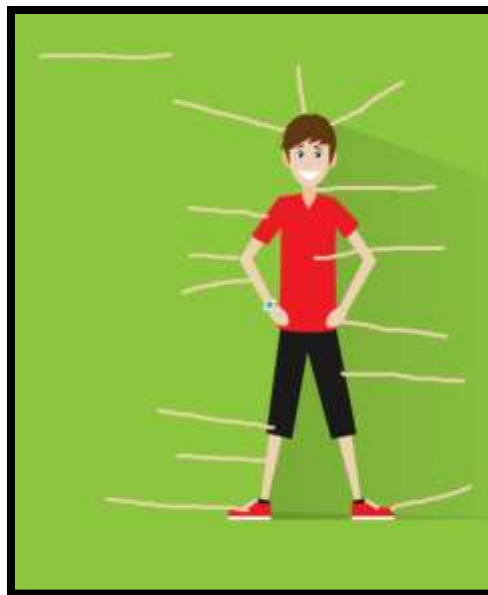
Suggested grade: Grades 2-5

_____ 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*



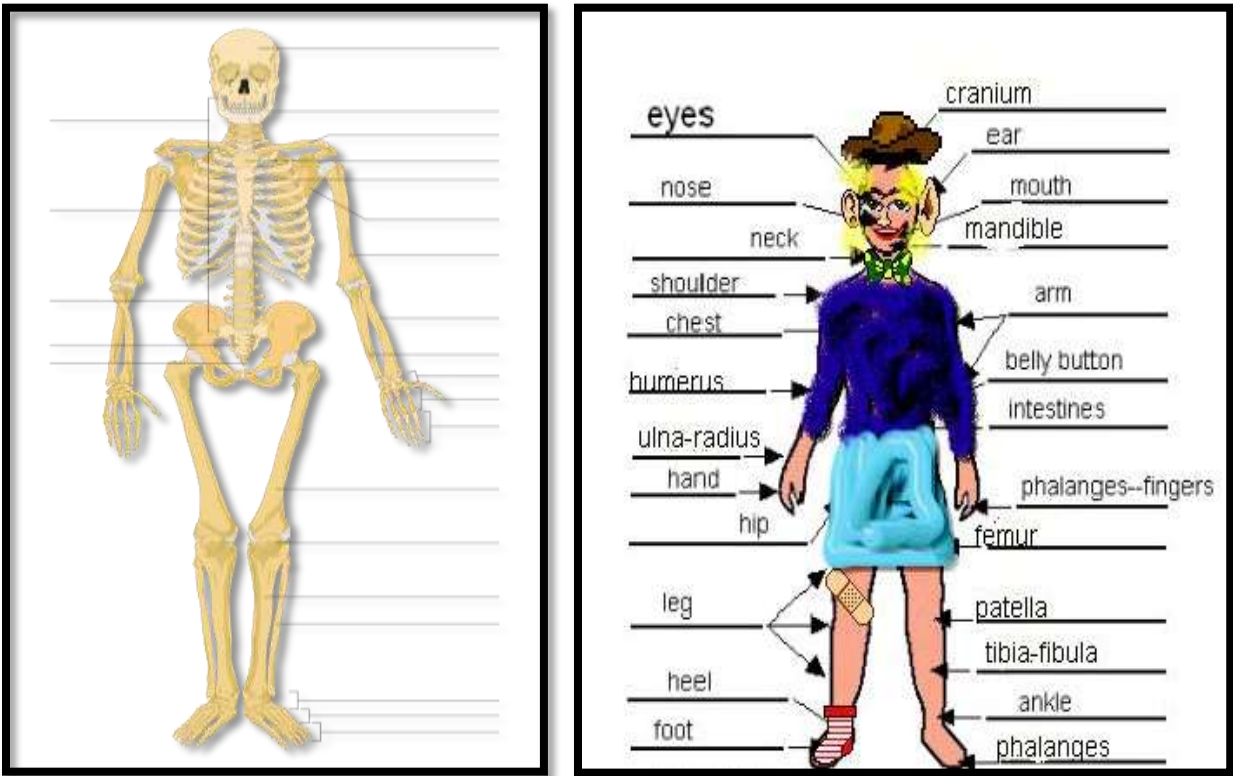
Fill-in-the-blank Template

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

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_____ Demonstrate how to complete worksheet:

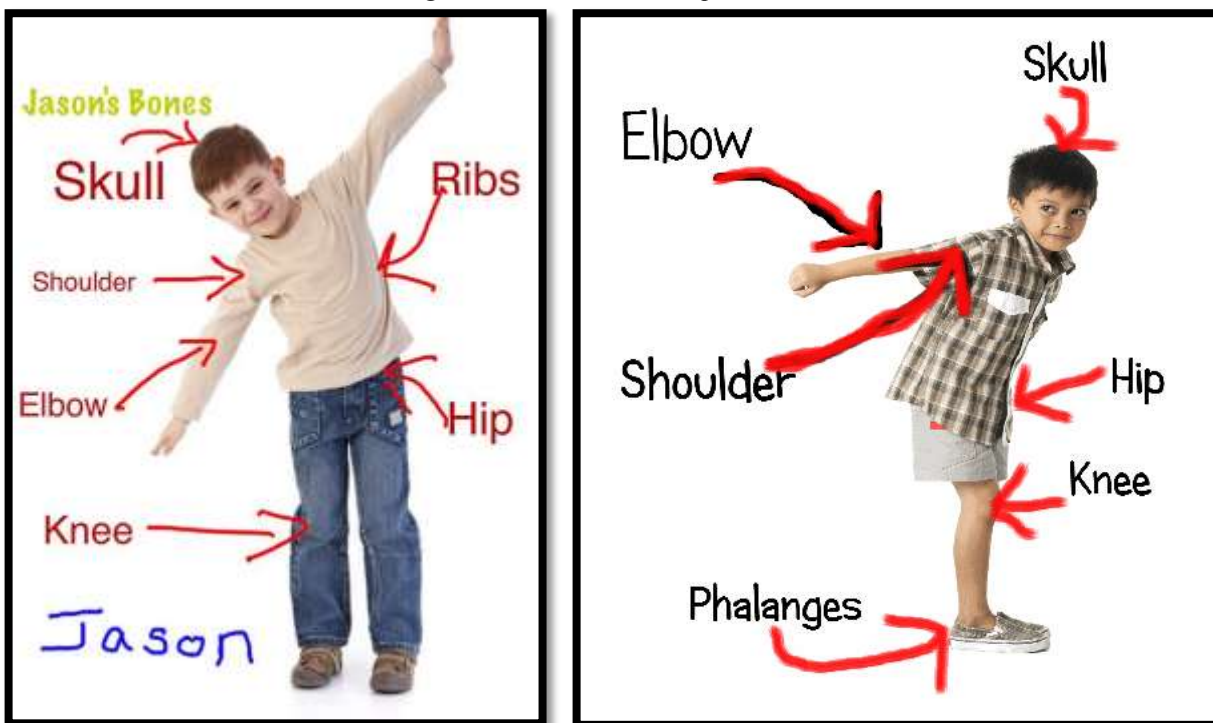
- *Open the class drawing program that allows students to write on an imported file.*
- *Demonstrate how to find the required template and bring it into the program.*
- *Fill in blanks with student collaboration on class screen. Use body part words from class. For example, if they say 'jaw' in class, 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.

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

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Figure 3—Mashup of Google Draw and PicMonkey



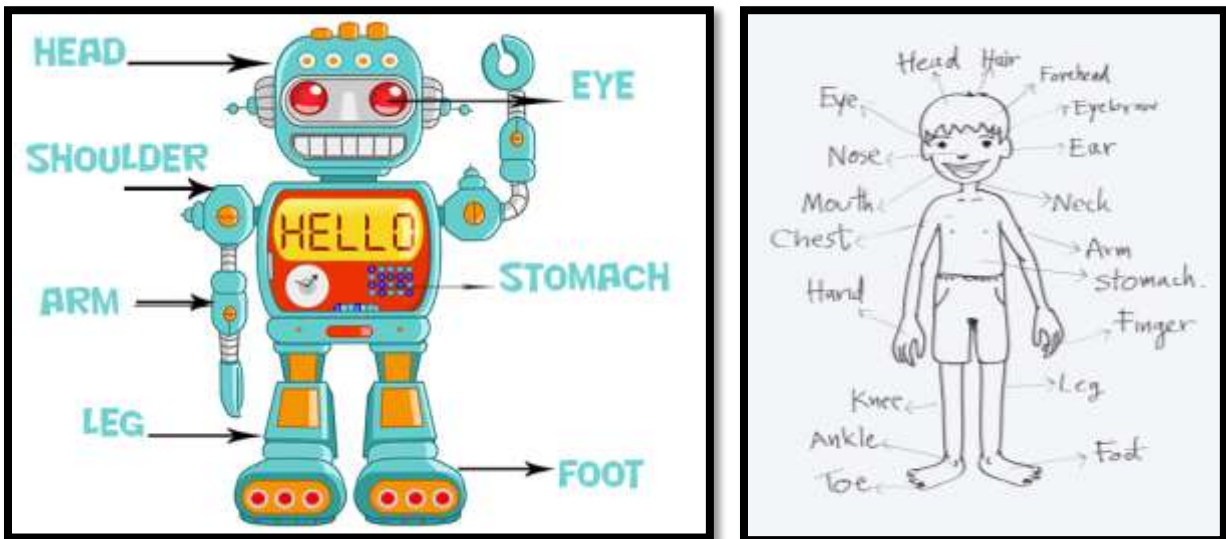
_____ **Alternatively:** Draw a full-body picture of themselves and label that.

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



_____ 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.*

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Deleted**

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- [Bridge Building](#)
- [Debate in the Classroom](#)
- [Digital Book Report](#)
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STEM Bundle



Which book?	Price
<i>K-8 Tech Textbook (each grade level—print, digital, or both)</i>	\$32.99/25.99//53.08 + p&h
<i>K-8 Student tech workbooks (with video, teacher manual)</i>	\$199 per grade level
<i>35 More Projects for K-6 (aligned w curriculum—digital only)</i>	\$31.99/25.99/52.18 + p&h
<i>55 Tech Projects—Volume I, II, or both (digital only)</i>	\$18.99/\$32.49 + p&h
<i>K-8 Keyboard Curriculum (print, digital, or both)</i>	\$25.99-\$64
<i>K-8 Student keyboarding wkbks (with video, teacher manual)</i>	\$199 per grade level
<i>K-8 Digital Citizenship Curriculum</i>	\$29.95/25.99/50.38 + p&h
<i>K-8 Common Core Lessons</i>	FREE-\$48.55 + p&h
<i>Pedagogic Articles</i>	\$6.99 (digital only)
<i>K-8 Tech Scope and Sequences (Word doc)</i>	\$9.99 each (digital only)
<i>Posters for the Tech Lab</i>	\$2.99 each (digital only)
<i>16 Holiday Projects</i>	\$4.99 (digital only)
<i>98 Tech Tips From Classroom</i>	\$9.99 (digital only)
<i>Classes (certificate and college credit)</i>	\$260-\$450
<i>Project-based learning (lesson plans)</i>	\$1.99 each on varied topics
<i>New Teacher Survival Kit (K-5)</i>	\$360 and up (+ p&h)
<i>New Teacher Survival Kit (K-6)</i>	\$380 and up (+ p&h)
<i>New Teacher Survival Kit (6-8)</i>	\$330 and up (+ p&h)
<i>Homeschool Tech Survival Kit</i>	Starts at \$99.00
<i>Bundles of lesson plans</i>	\$7.99 and up
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<i>Consulting/seminars/webinars</i>	Call or email for prices
Total	

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Questions? Contact Zeke Rowe

