

# TOY EMERGENCY ROOM

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Time: 30-90 minutes+

## Content Connections:

- ELAR - Narrative, Characterization, Cause & Effect
- Health
- CTE - health care
- Robotics

**Topic:** The students are the ER staff; the teacher plays the director (for example, you'll start by saying, "Hello, doctors. You are needed in the ER." Depending on the brain age, this topic can be a quick, "one-off" activity focused on prosthetics, or it can be a multi-session deep dive into robotics and wiring.

## Materials *(depends on the level of difficulty(s) selected)*

- (Easy)
  - Teddy Bears (one for every 2-3 kids)
  - Bandages
  - Miscellaneous "doctor" supplies (stethoscope, tongue depressor, etc.)
- (Medium)
  - Teddy Bears w/ hole(s) at seams (one for every 2-3 kids)
  - Bandages
  - Miscellaneous "doctor" supplies (stethoscope, tongue depressor, etc.)
- (Hard)
  - Toys with missing arms (Lego figurines, army men, Barbie/Ken dolls)
  - Array of arm analogs (this could be the arms you removed or K'NEX toys, or popsicle sticks--anything you need to attach and secure a replacement arm).
  - Bandages
- (Extreme)
  - Toys with missing arms (Lego figurines, army men, Barbie/Ken dolls)
  - Computers with CAD software (or online CAD tools)
  - Rulers
  - (optional) 3D Printer.

# DIRECTIONS

## Step One: Narrative

- Immediately move into the narrative--instead of saying “Welcome to class” start by saying, “Hello Doctors. You are needed in the Emergency Room.” At this, take them to the patients (see levels) and explain the situation.
  - EASY: The teddy bear (or other stuffed animal) has been damaged...
  - MEDIUM: The teddy bear (or other stuffed animal) has a cut...
  - HARD: The toy is missing it’s arm and need an arm transplant from other available arms
  - EXTREME: The toy is missing it’s arm and needs a new one built to spec using 3D modeling and printing.

## Step Two: Diagnosis and Plan

- Have the doctors work in small groups (2-3) to infer what they believed happened, and the best course of action. For example:
  - EASY: What happened that the teddy bear has been damaged; where does s/he need bandaging?
  - MEDIUM: What happened that the teddy bear has the wound; how will they stitch the bear so it heals properly?
  - HARD: What happened that the toy is missing an arm; what would be the best substitute from the provided options?
  - EXTREME: what happened that the toy is missing an arm; how will you measure and build a replacement?

## Step Three: Uphold the Hungry Hungry Hippocratic Oath

- Let the doctors continue to work in small groups--taking turn building, creating, suturing, etc. until they have met the Toy Emergency Room Requirements (printable size below).

<b>EASY</b> <b>Teddy Bear bandage</b>	<b>MEDIUM</b> <b>Teddy Bear suture</b>	<b>HARD</b> <b>Donor transplant</b>	<b>EXTREME</b> <b>Prosthetic creation</b>
An array of teddy bears and stuffies are displayed.  No external damage has been done, as younger kids are asked to infer and	An array of teddy bears and stuffies are displayed.  Holes have been made in certain areas.	An array of toys (such as Barbie Dolls, Lego figures, plastic army men, ect.) have an arm removed.  Students infer what happened and then	An array of toys (such as Barbie Dolls, Lego figures, plastic army men, ect.) have an arm removed.  Students infer what happened and then

<p>make a story for why they are in the ER.</p> <p>Wrapping bandages, bandaids, etc. are provided to “play doctor.”</p>	<p>Students not only infer what happened, but then work to suture and bandage the wound.</p> <p>Needles, thread, thimbles, and bandages.</p>	<p>review the donor table (where arms and analogs for arms are located).</p> <p>The students then create the prosthetic and attach using bandages.</p>	<p>take measurements to build a replacement using 3D CAD design.</p> <p>The students then attach the prosthetic using bandages.</p>
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# TOY EMERGENCY ROOM DOCTORS’ HUNGRY, HUNGRY HIPPOCRATIC OATH

I will do no harm to my patient

I will not be ashamed to say “I do not know” when the skills of another are needed

I will do my part to restore the toy to the optimal working condition

