

2020 CKTSA Regional Early Entry Prompts

Middle School Essays on Technology:

Submit Essay Only

Prompt: Community Colleges

Middle School Leadership Strategies:

Prompt: The school system has invited your chapter to make a three to five (3-5) minute presentation at the upcoming district-wide meeting for all students who will be attending middle school next year and their parents. The purpose of your presentation is to educate the parents and students about opportunities available to them through your school's STEM and TSA programs. Give that presentation

Middle School Technical Design:

Problem:

According to the Centers for Disease Control, "arthritis" describes a variety of conditions causing inflammation in joints, in tissues surrounding the joints, and in other connective tissues. The resulting pain and stiffness can make it difficult for people suffering from arthritis to complete basic tasks with everyday items. Arthritis sufferers can have pain in their elbows, shoulders, and hands, which can make it difficult for them to lift and move around large beverage containers to pour into a cup or bowl. Follow the steps of the design process to develop a device that will aid people with arthritis in pouring liquid from containers. This device should improve the quality of life of the arthritic user; the effort to use the device should not be more painful or strenuous than the effort it already takes for the person to pour liquids by hand.

Design Criteria:

- Must be able to hold a variety of containers, including 1-liter bottles, 2-liter bottles, pitchers, ½" gallon milk bottles, and 1-gallon milk jugs.
- Must be able to pour liquid into cups, glasses, cereal bowls, and mixing bowls for cooking.
- Must fit into a typical kitchen, so it can be based on countertops, walls, cabinets, floors, tables, etc.
- Must be able to hold drink containers with stability and not fall over onto the person who is using it.
- Include information about how the device will be powered.
- Include information about how the length of pour will be monitored and cut off.

High School On Demand Video Prompt:

Create a movie up to one minute in length.

Required Props:

- Smart Phone
- Candy Bar
- ECU Logo

Required Line of Dialogue:

"Finally, we found who caused all those issues"

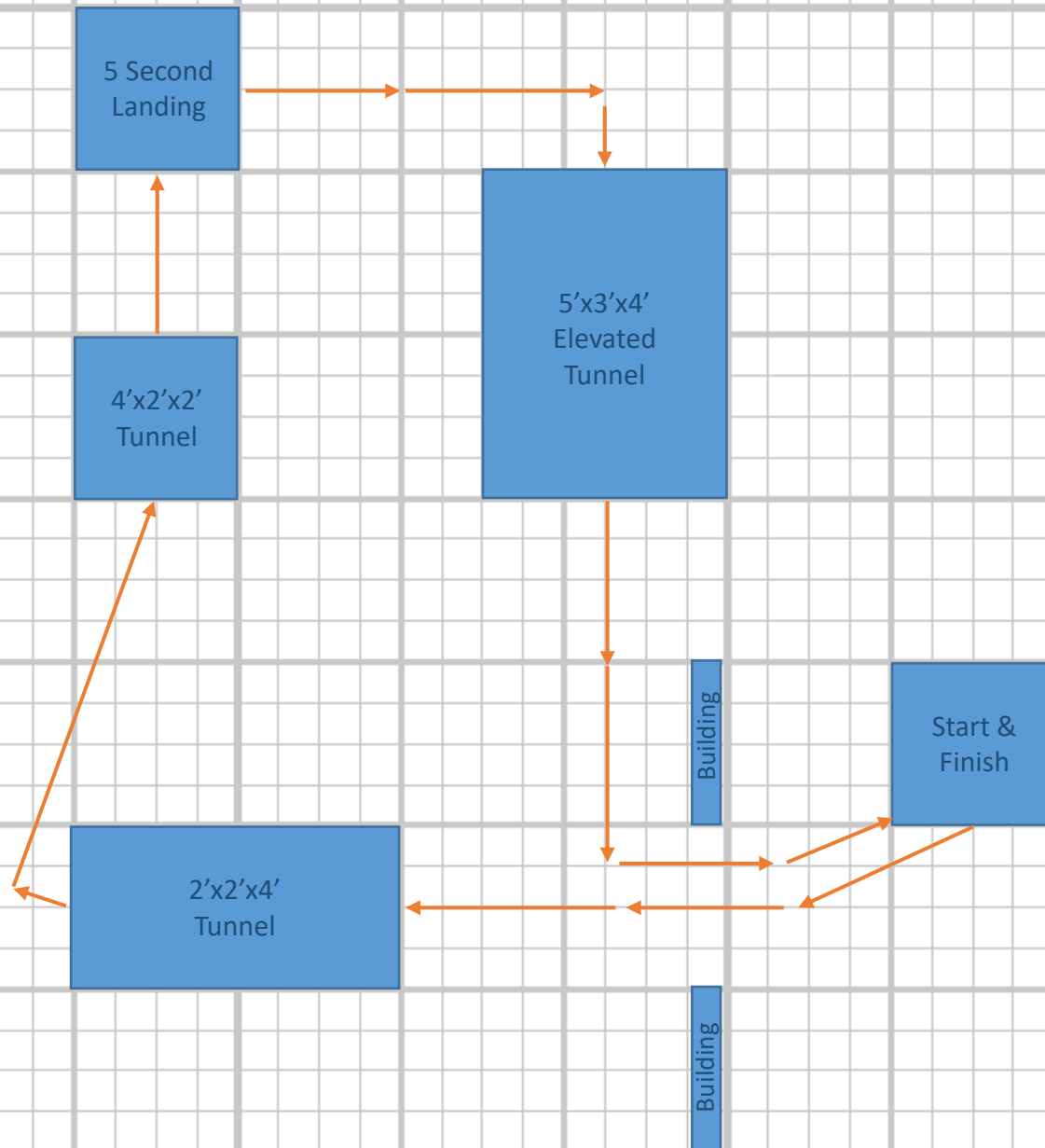
High School Prepared Presentation Prompt:

Developing your career path

Middle School & High School Unmanned Aerial Vehicle:

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Scale 1 box = 6"



2020 – CKTSA

Unmanned Aerial Vehicle Prompt

16'x16' arena

- Five (5) Obstacles

Height x Width x Depth

- 2 – 6'x2' Flat Buildings
- 1 – 4'x2'x2' Tunnel
- 1 – 2'x2'x4' Tunnel
- 1 – 5'x3'x4' Elevated Tunnel
 - (2' high legs with 3' high tunnel)



TECHNOLOGY STUDENT ASSOCIATION