

Textiles

Performance Textiles

Subject: Visual Arts/Science/Tech/History/Sports Science

Grades: 9-12

Skills:

- Visual arts
- Critical thinking
- Problem solving
- Innovation

Materials:

- Worksheets
- Colored pencils
- Access to computer for research

Summary:

The woven fabrics made on the Jacquard loom in the Bates Mill were revolutionary. Watch the “Curator Corner” video on the website and listen to why and how the loom broke new ground for textile production. Since that time textile production has only become more refined in the areas of production, use, and material composition. Large producers of sporting equipment, like New Balance and Nike, have focused on developing textiles specific to different sporting events and different seasons. Whether you ski a mountain or ride a horse, there are textiles and designs specific to your sport.

As seen on the Unit on Textiles, a group at MIT is actively working to develop the next generation of sports wear that is unlike anything seen before: a “second skin.” Other, similar groups are doing the same to merge the demands of the human body, climate, performance and biodegradable features.

Discuss:

What does the video on the MIT site inspire in your thinking of textile design? What does the video in the “Curator Corner” say about where we were as textile producers who used the Jacquard loom and child laborers to fulfill product orders?

Instructions:

Imagine you are a textile designer and your job is to design sporting wear for two different athletes. Their profiles are provided below:

Professional woman marathon runner

She is 24 years old, has a slight heart murmur that physicians want monitored during her run, and she runs in both hot and cold climates. Some question how well she is rebounding, mentally and physically, after a marathon and would like to have measurable data to analyze this. She is endorsed by top athletic companies and funding for her gear is not an issue.

Male high school basketball player

He is extremely talented and watched by top colleges for recruitment. Physicians are recording measures of his fitness and performance ability at every opportunity—information that colleges want access to. He plays only in the local high school circuit, which is located in northern Maine, a cold climate. His muscles fatigue if not sufficiently warmed up before he plays. He does not have access to funding for fancy gear.

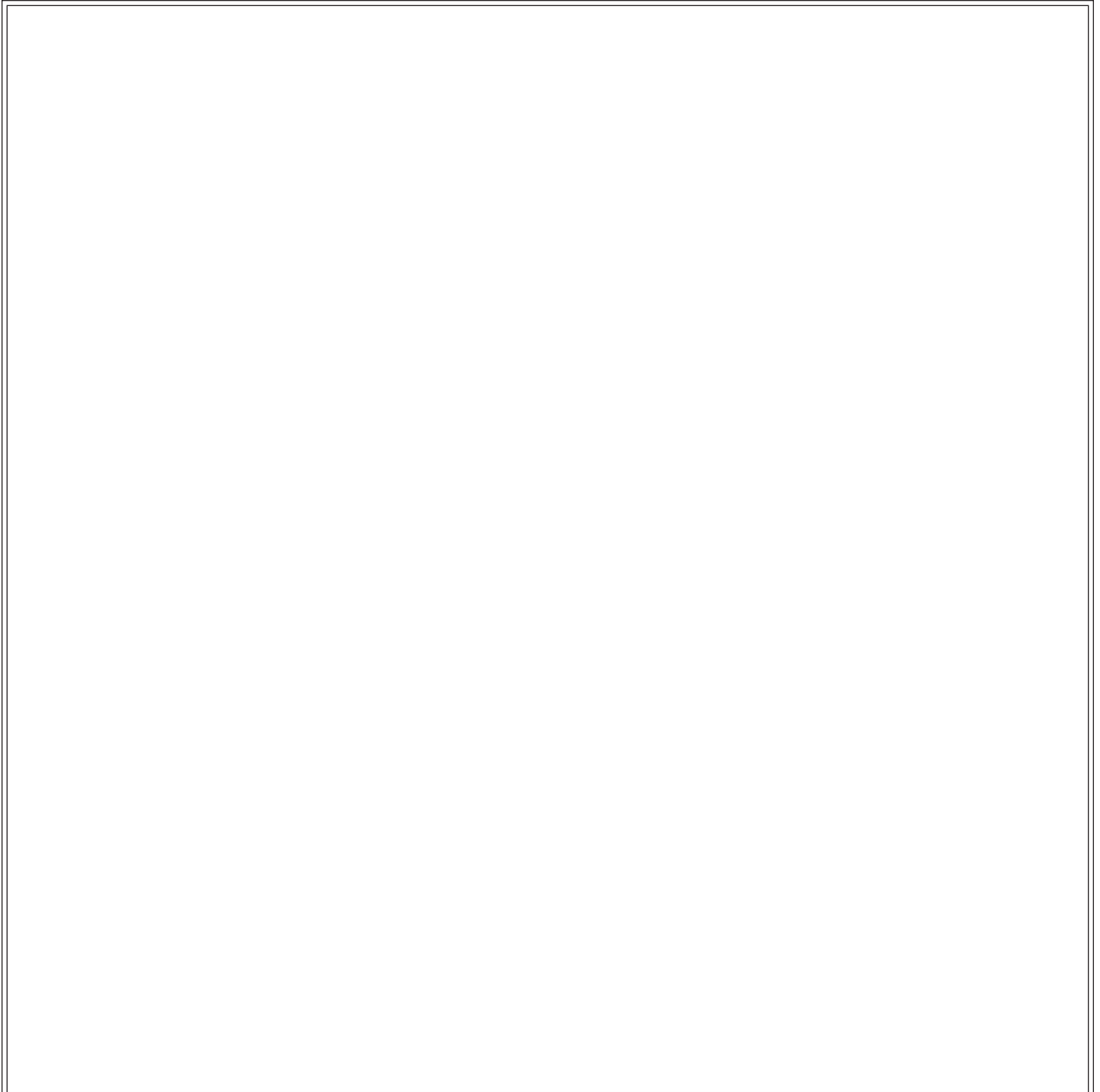
Using the worksheet, and taking inspiration from the MIT website as well as other sources you research for one hour (and cite), sketch the “ideal” performance clothing for our two athletes. Make notes as to what features the clothing does or does not have. Keep in mind their specific needs and potential financial access to your designs. Consider the impact on the planet the clothing may or may not have when it is disposed of.

Performance Textiles

Name: _____ Date: _____

Professional woman marathon runner

Ideal performance clothing

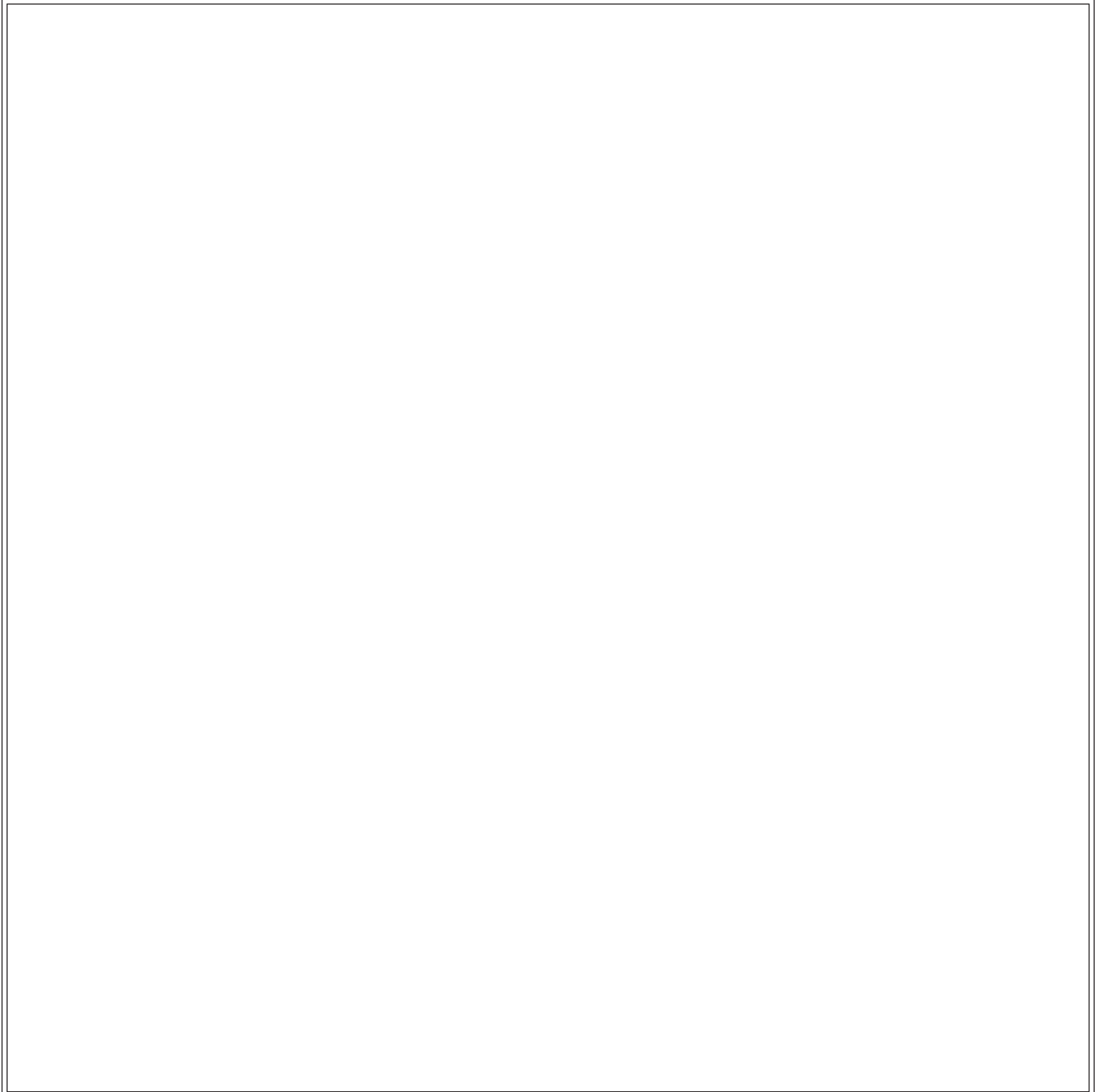
A large, empty rectangular box with a thin black border, occupying the majority of the page below the text. It is intended for a student to draw or write their response to the prompt 'Ideal performance clothing'.

Performance Textiles

Name: _____ Date: _____

Male high school basketball player

Ideal performance clothing

A large, empty rectangular box with a thin black border, occupying the lower two-thirds of the page. It is intended for a student to draw or write their response to the prompt 'Ideal performance clothing' for a 'Male high school basketball player'.

Overview of performance clothing for a male, high school basketball player

Overview of performance clothing for a professional woman marathon runner
