

SETTING THE STAGE FOR TACTILE UNDERSTANDING

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Objectives of Session

- Participants will identify at least 10 important tactile skills needed by young students and products/materials to support the development of each skill.
- Participants will identify a variety of games and activities that can be used to encourage tactile skill development within a recreational context.
- Participants will be able to locate the online Tactile Skills Matrix that pairs tactile skills with available APH products.
- Participants will discuss their own creative ways to encourage development of tactile skills.

Proficient Tactile Reader





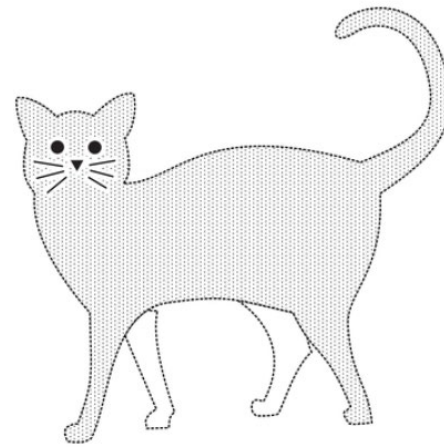
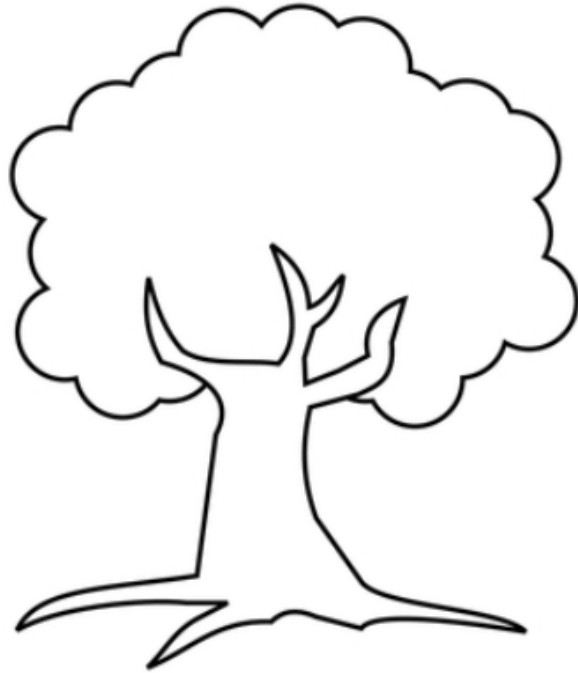
Definition of Tactile Graphics

Tactile Graphics are raised/embossed images used by braille readers to obtain information that print readers receive from visual pictures and displays (e.g., maps, graphs, storybook pages).

Visual vs. Tactile Perception

- Touch gathers information in a sequential fashion. Individual pieces of information, provided as raised lines, dots, and textures, are connected to build a mental image.
- Touch requires more time to navigate and glean needed information from a tactile graphic.
- Touch does not allow instant recognition of different perspectives (top view, side view).
- Touch does not easily discriminate differences in scale.
- Touch does not discriminate spatial relationships that involve depth perception (e.g., *behind*, *closer to*, *away from*) within a tactile graphic.
- Touch relies on labels and supporting text for graphic identification and context.

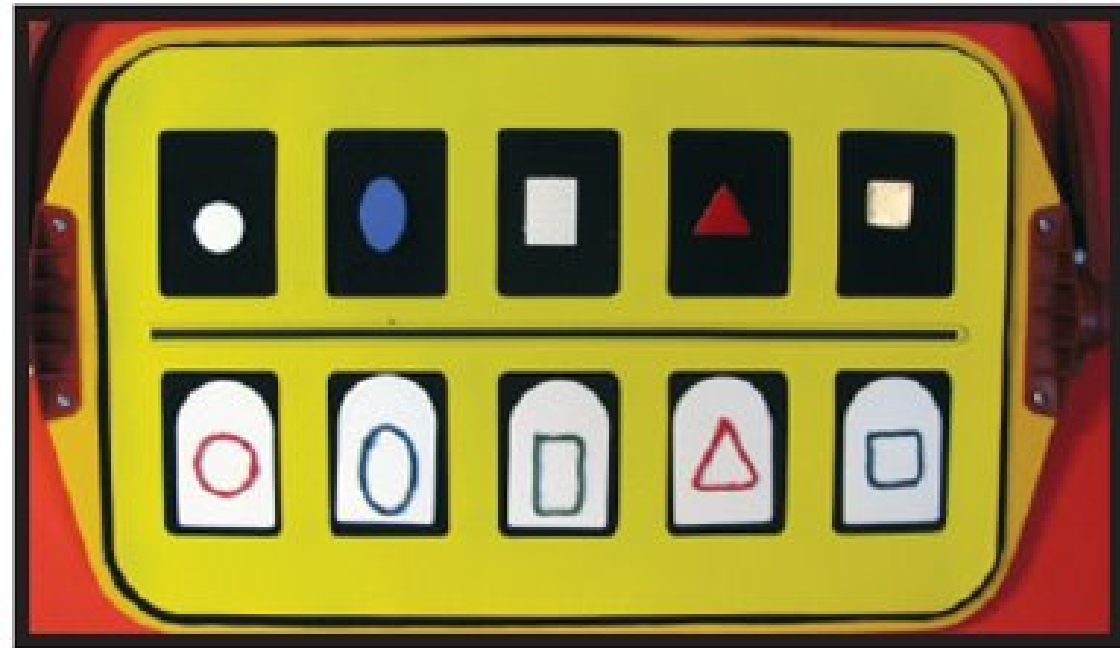
Visual vs. Tactile Perception Example



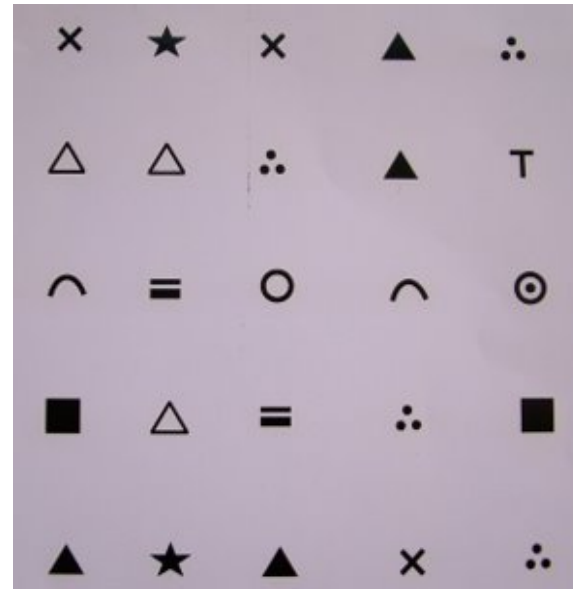
Exploration of Real Objects



Shape Identification



Shape Identification (continued)



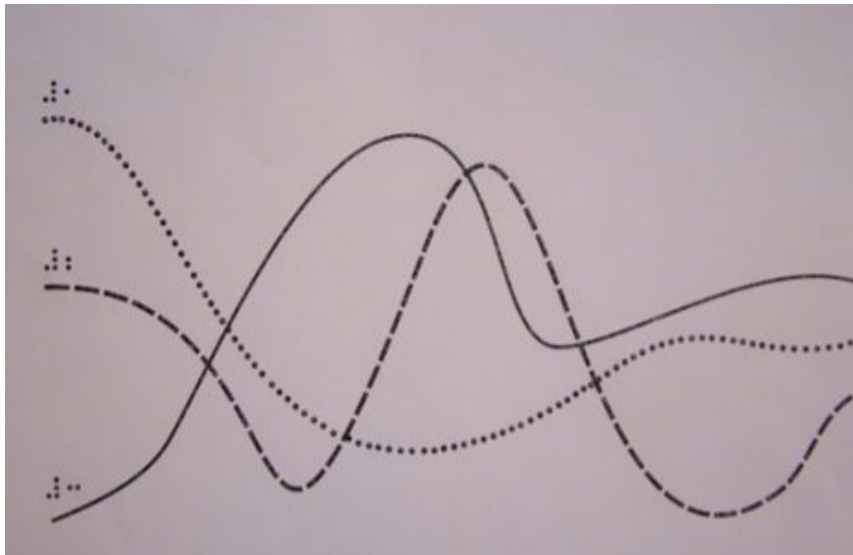
Texture Discrimination



Texture Discrimination (continued)



Line Tracking

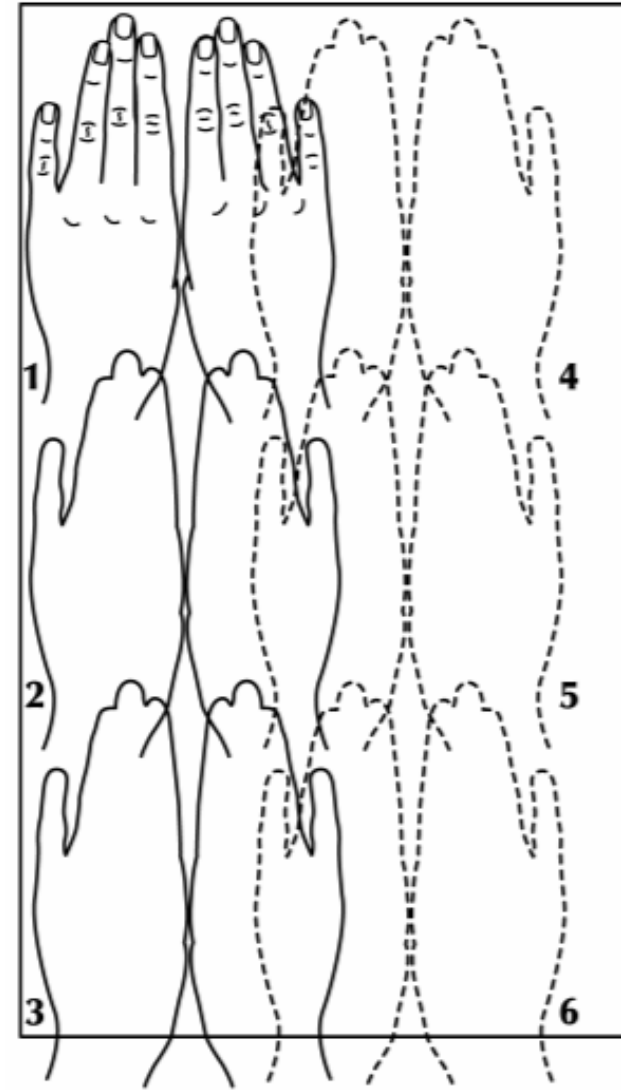


Line Tracking (continued)

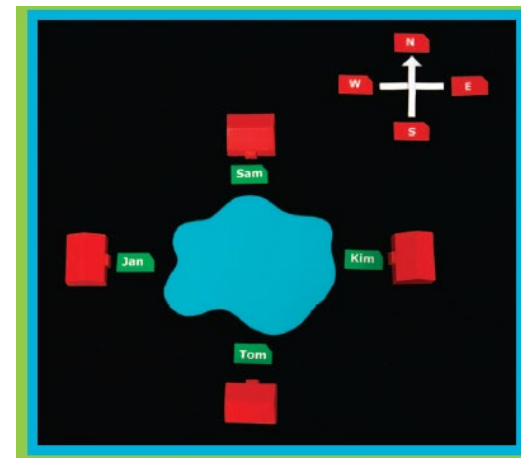
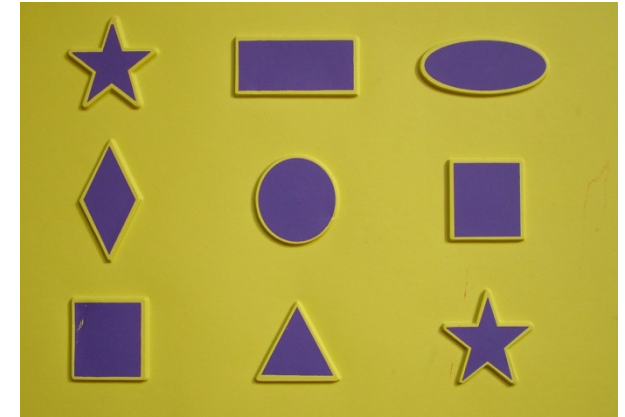
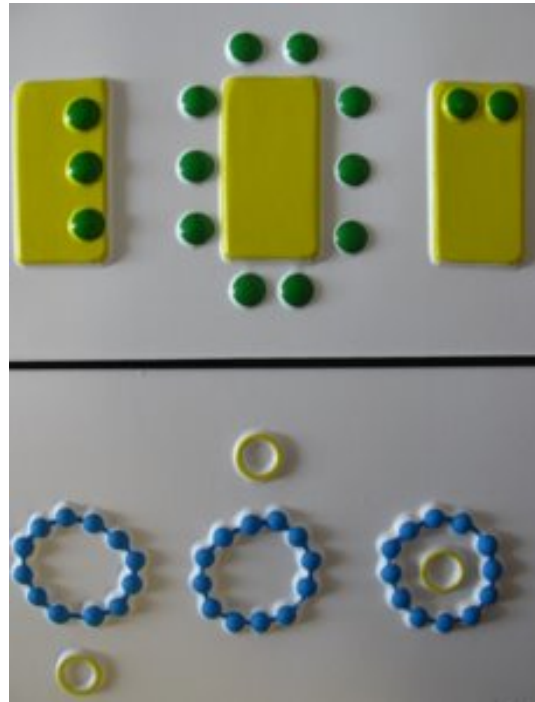
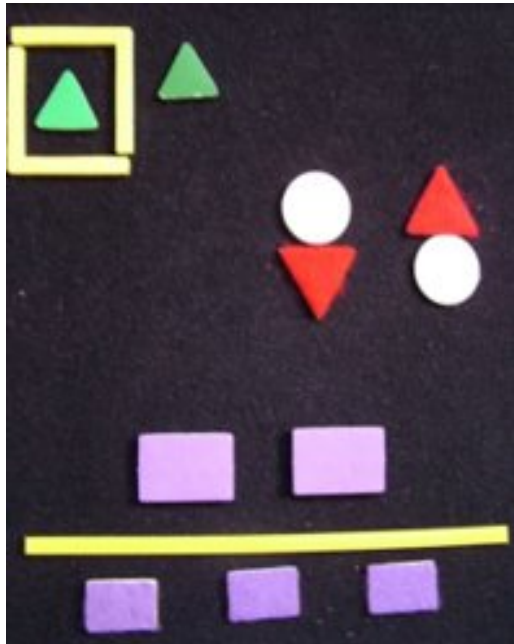


Systematic Scanning

Use one finger as a returning reference point as another finger traces the entire shape start to finish.



Spatial Understanding



Spatial Understanding (continued)



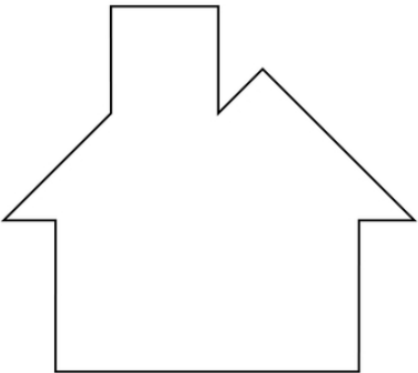
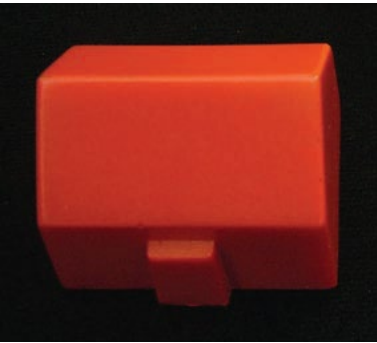
Symbolic Understanding



Symbolic Understanding (continued 2 or 3)



Symbolic Understanding (continued 3 of 3)



3-D to 2-D Interpretation

REAL OBJECT



MODEL



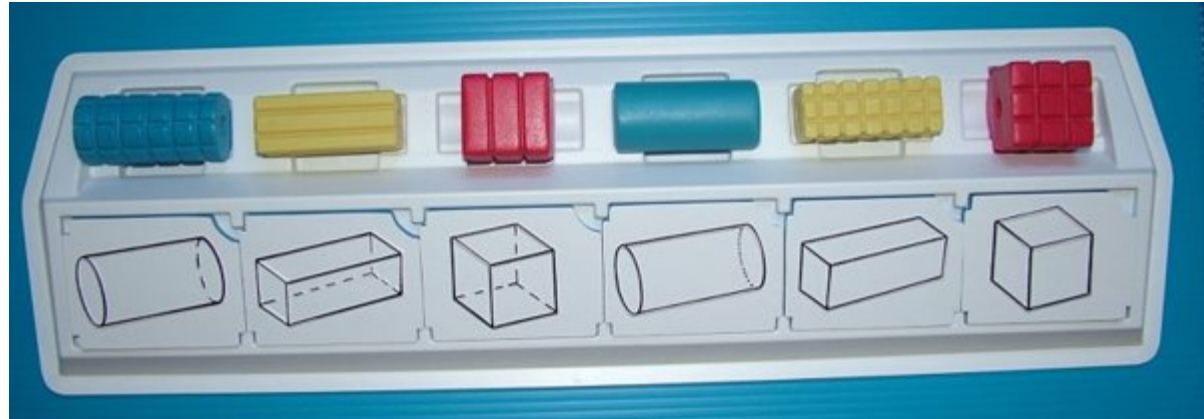
TACTILE
DRAWING



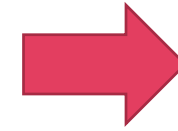
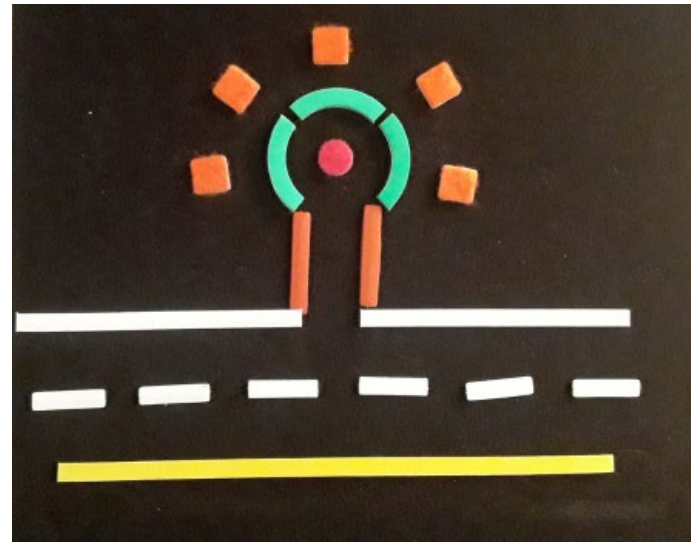
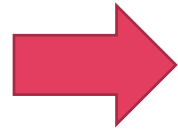
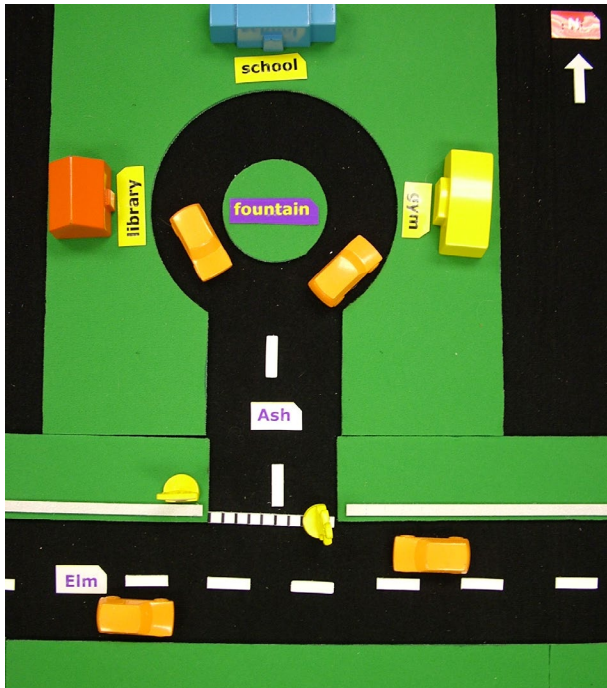
3-D to 2-D Interpretation (continued 2 of 4)



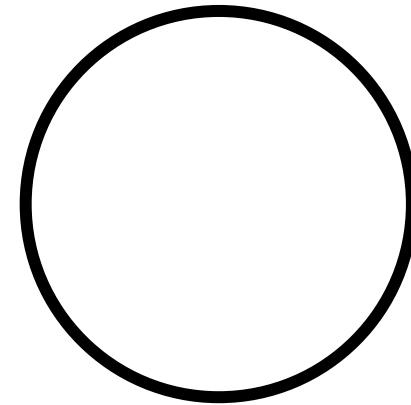
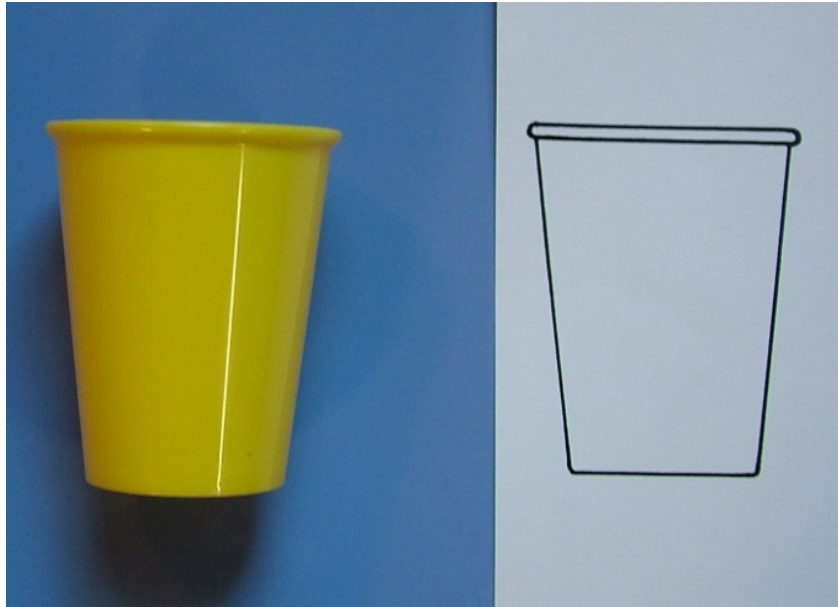
3-D to 2-D Interpretation (continued 3 of 4)



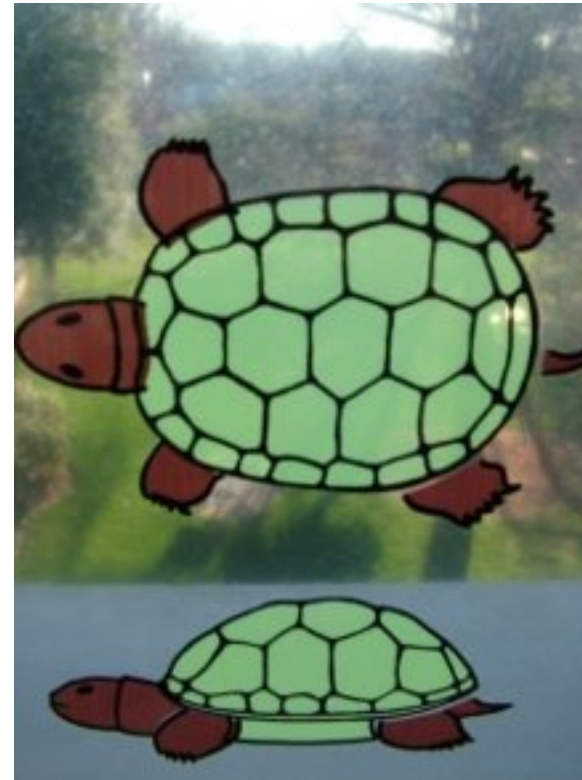
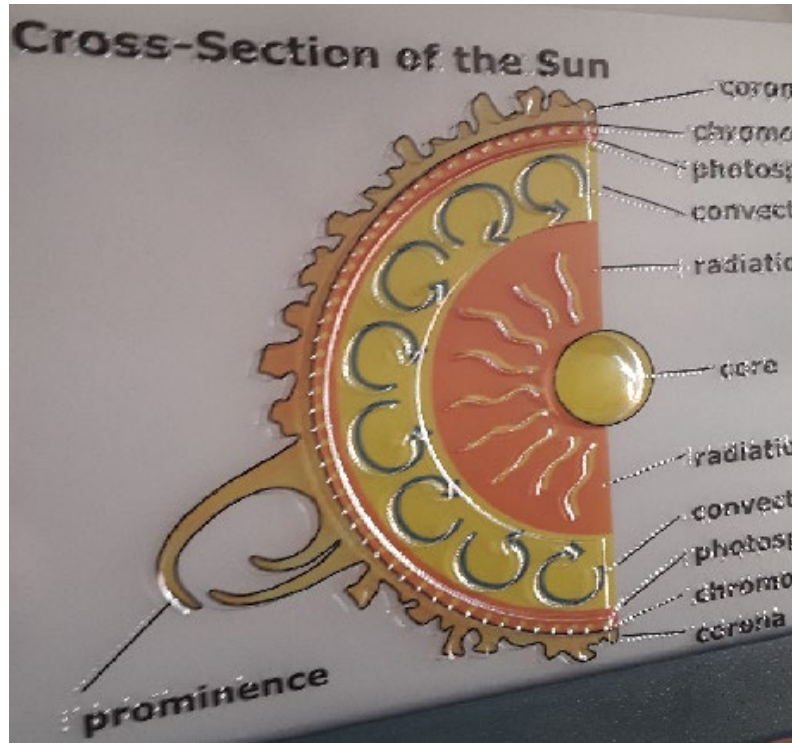
3-D to 2-D Interpretation (continued 4 of 4)



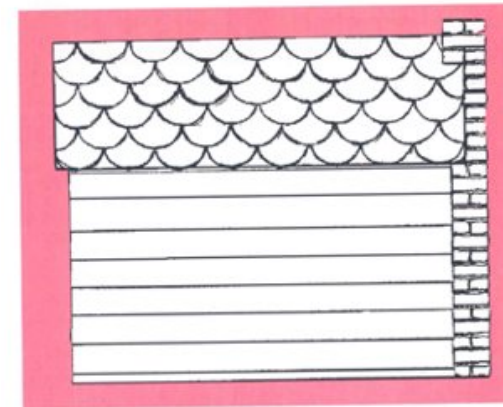
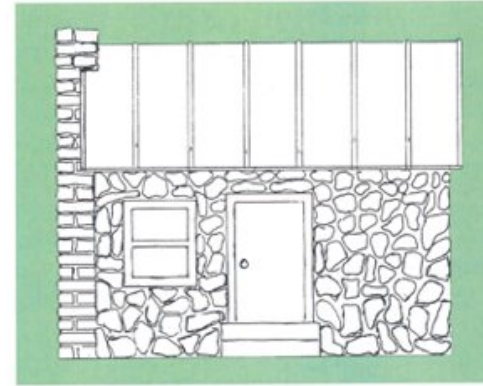
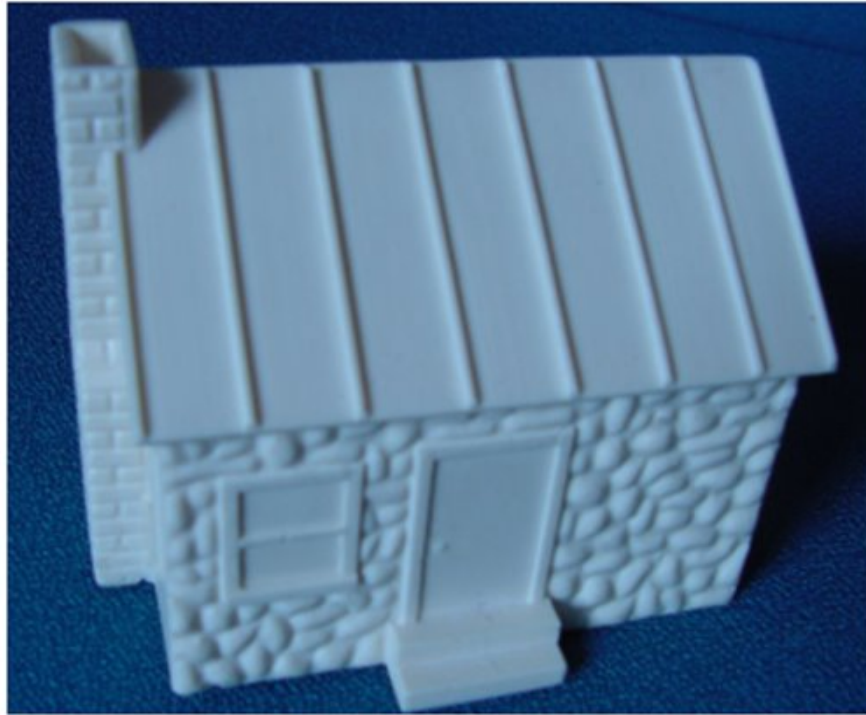
Understanding Perspective



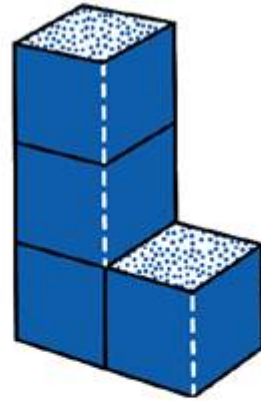
Understanding Perspective (continued 2 of 4)



Understanding Perspective (continued 3 of 4)



Understanding Perspective (continued 4 of 4)



Front View



Right Side

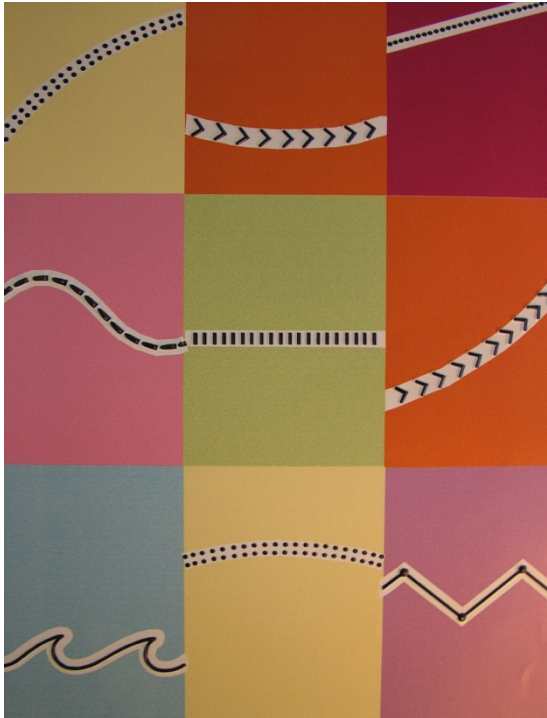


Top View

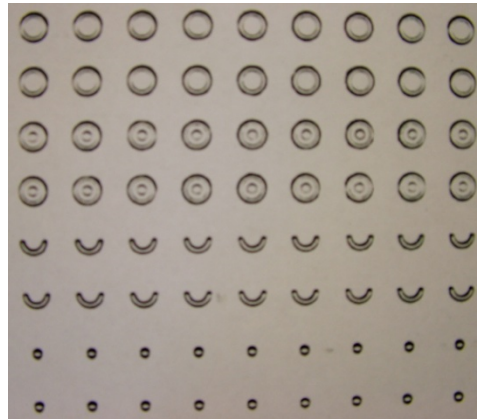


Familiarity with Tactile Terminology

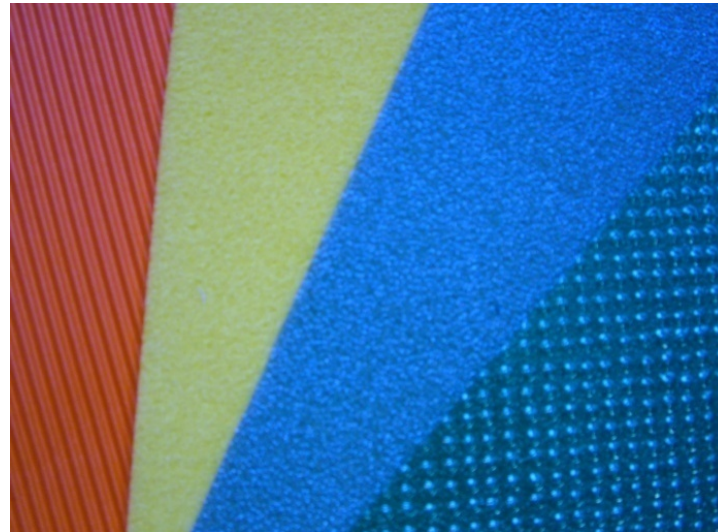
Line Paths



Point Symbols



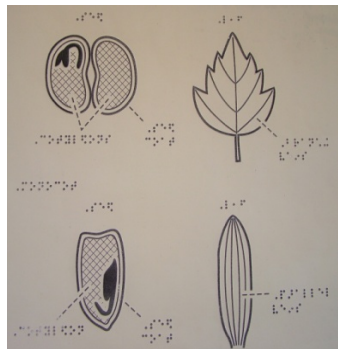
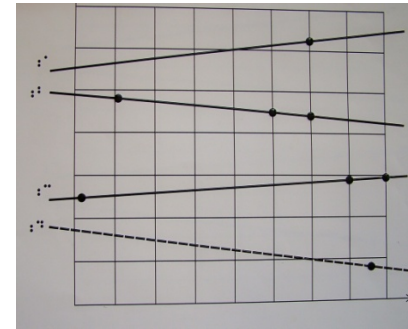
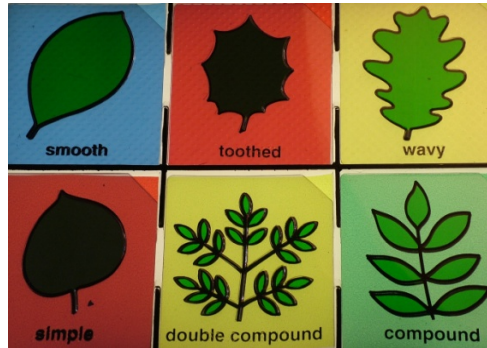
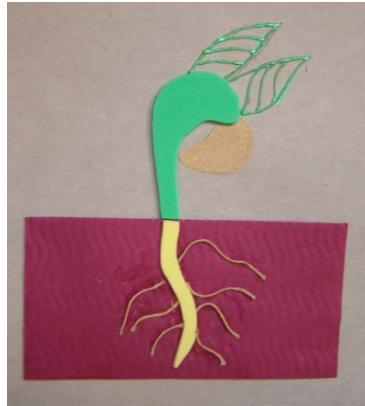
Textures/Areal Patterns



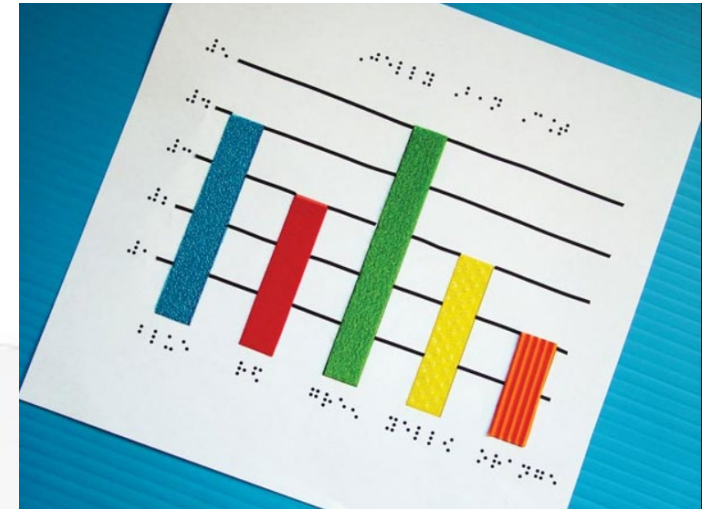
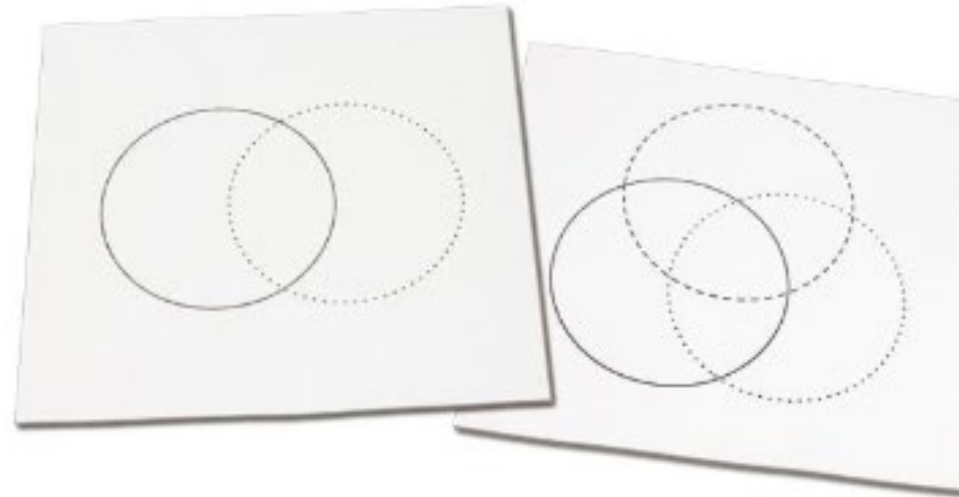
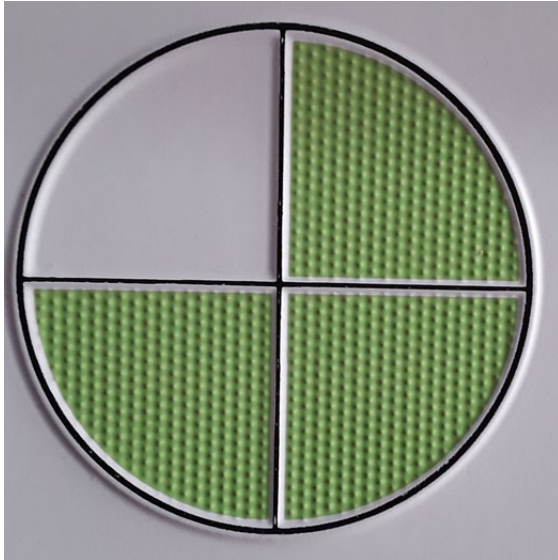
Labels



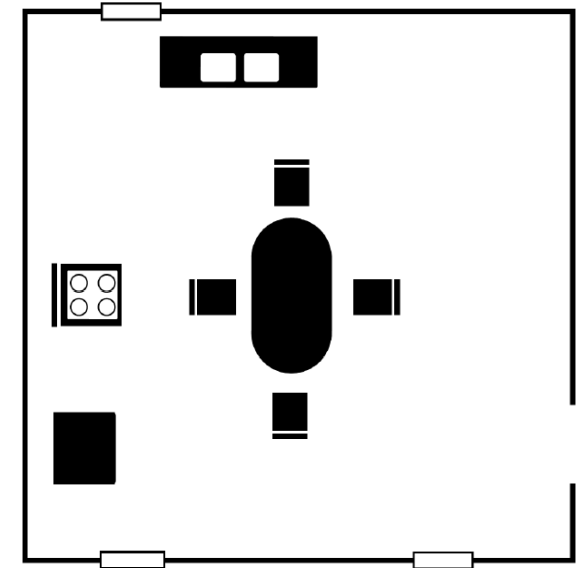
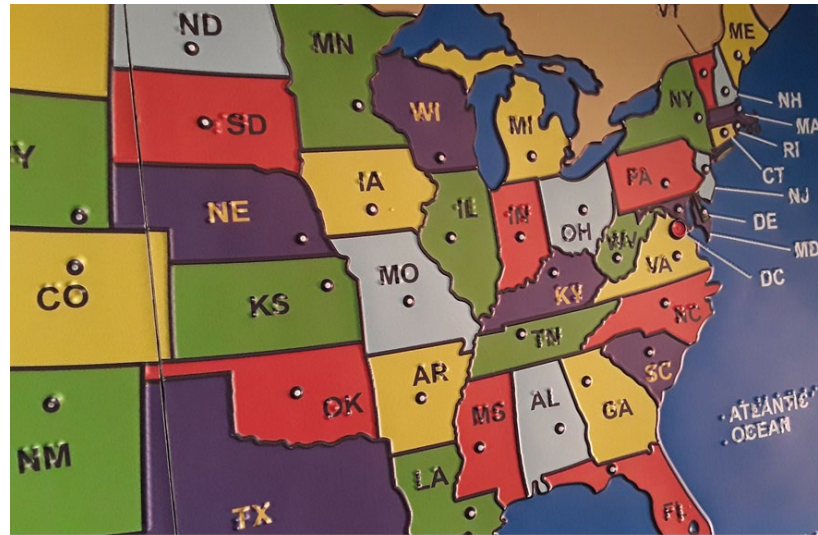
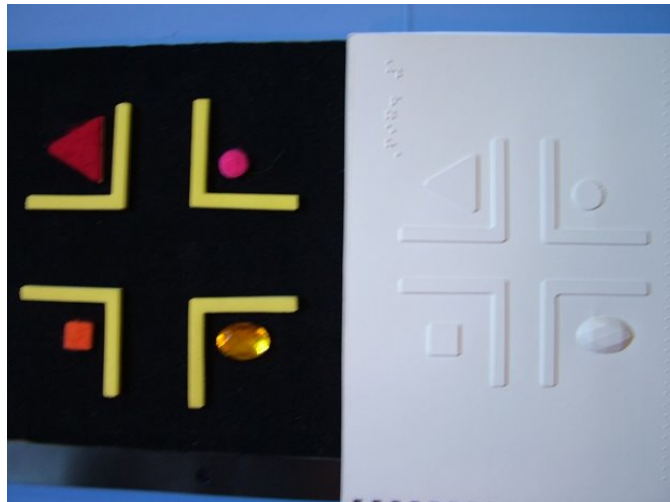
Familiarity with Tactile Methods



Reading Tactile Graphs and Charts



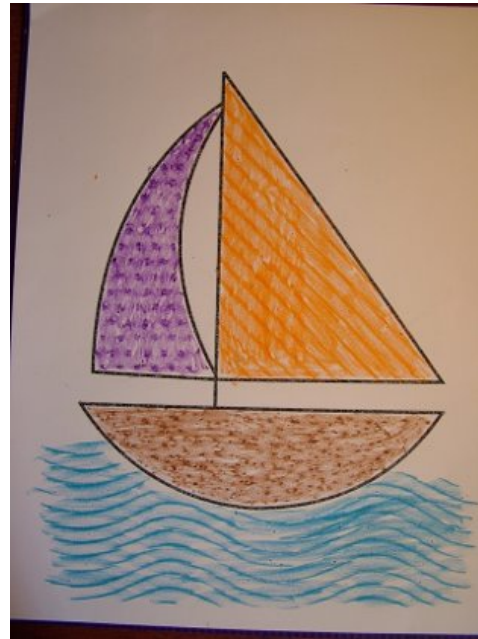
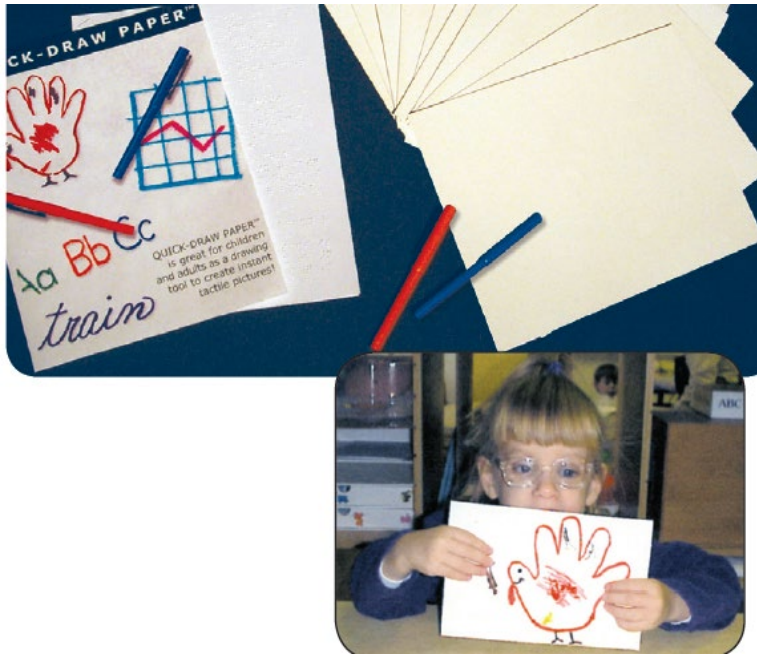
Reading Tactile Maps



Reading Keys and Legends



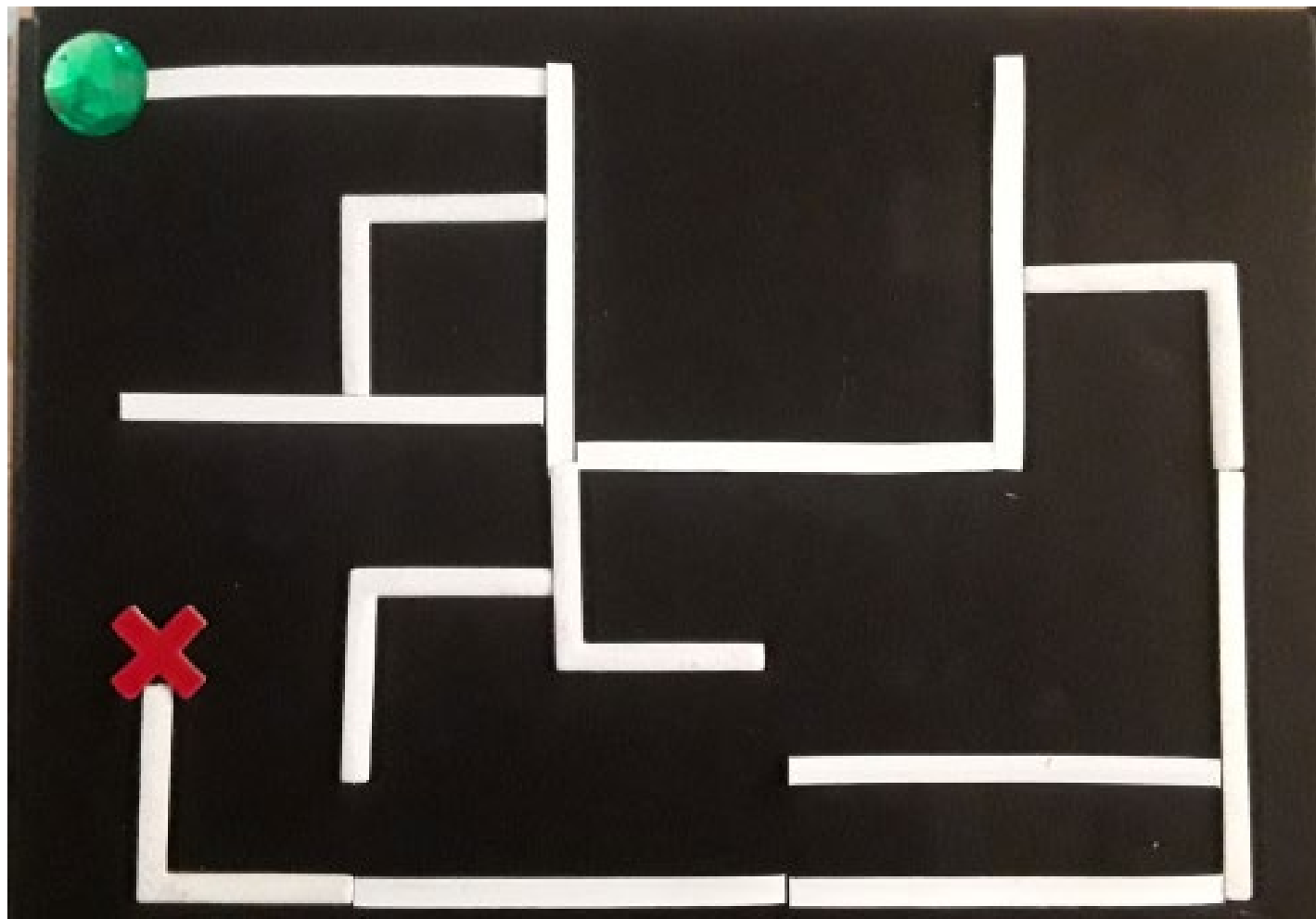
Creating Graphics Independently



Creating Graphics Independently (continued)



Game Example for Building Tactile Skills #1



Game Example for Building Tactile Skills #2

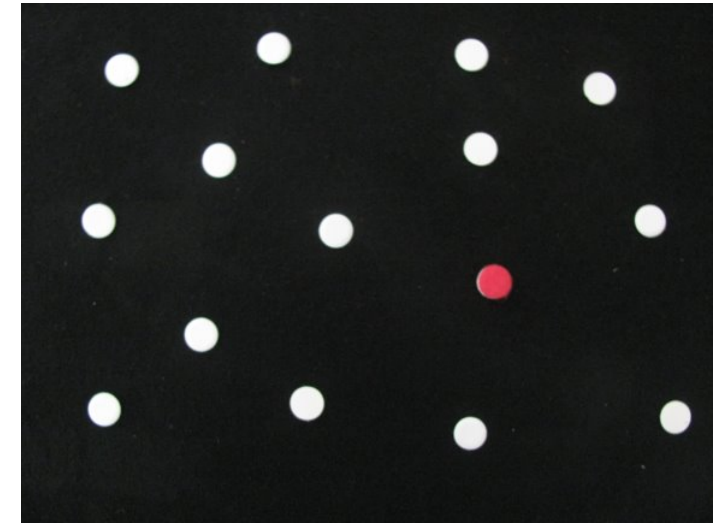
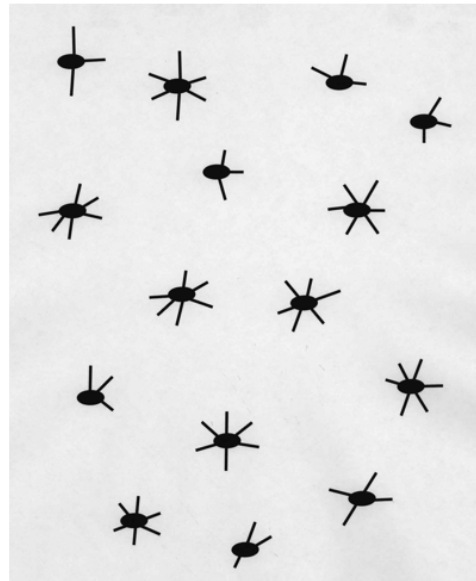


Game Example for Building Tactile Skills #3



**Game
Example for
Building
Tactile
Skills #4**

How many six-legged critters are there?

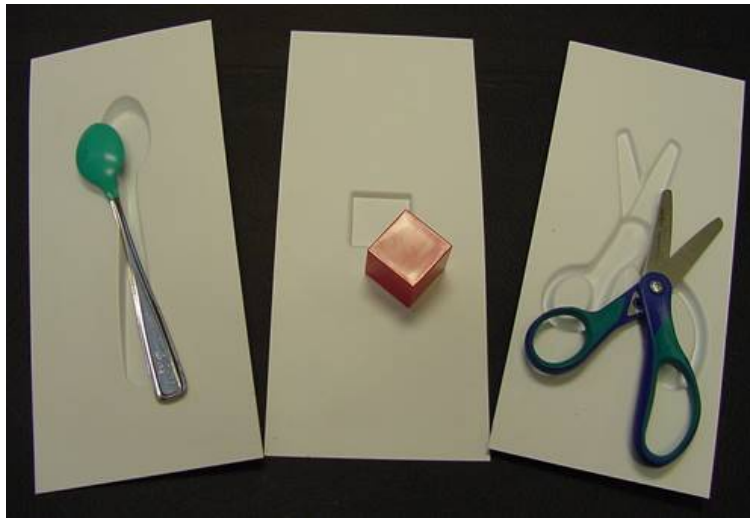


Game Example for Building Tactile Skills #5

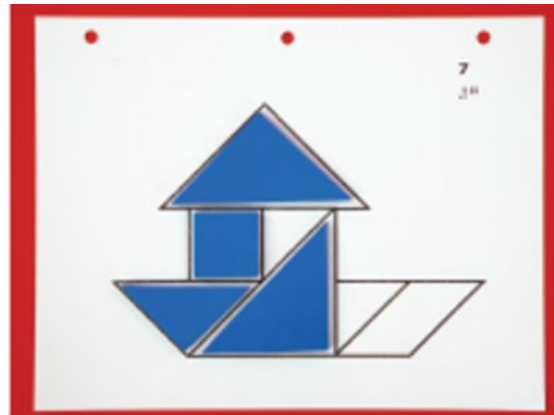


Zigzag

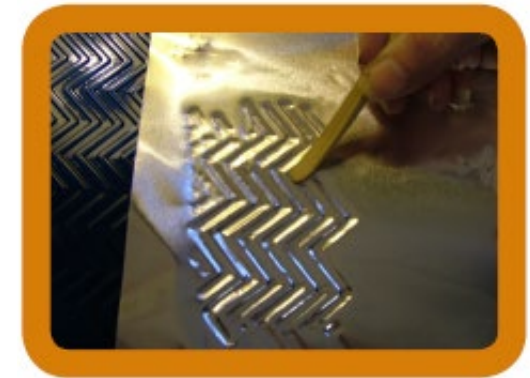
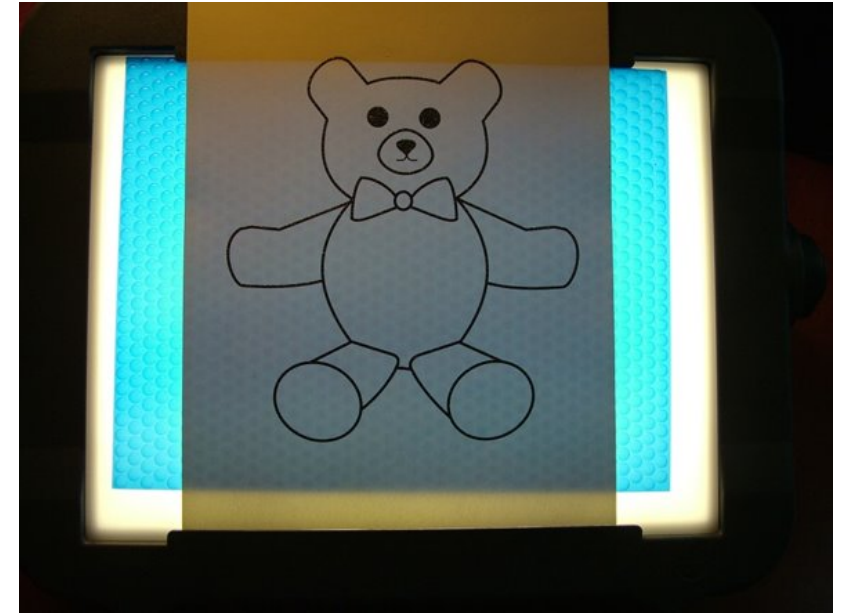
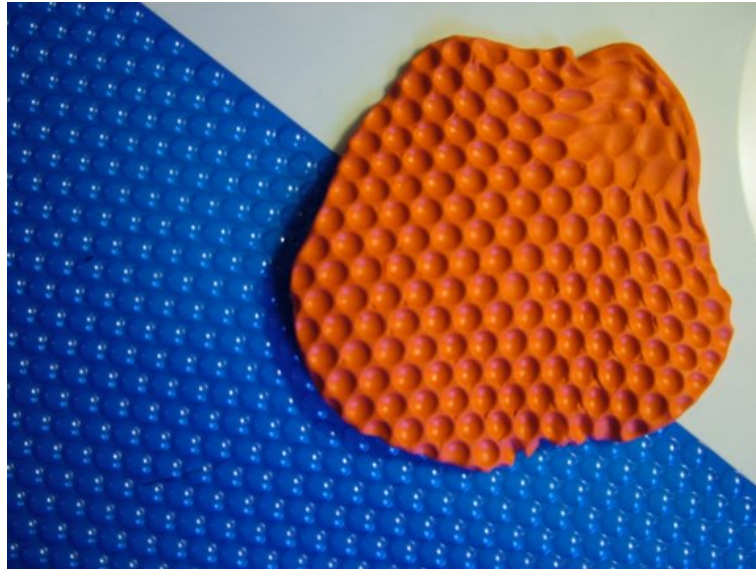
**Game
Example for
Building
Tactile
Skills #6**



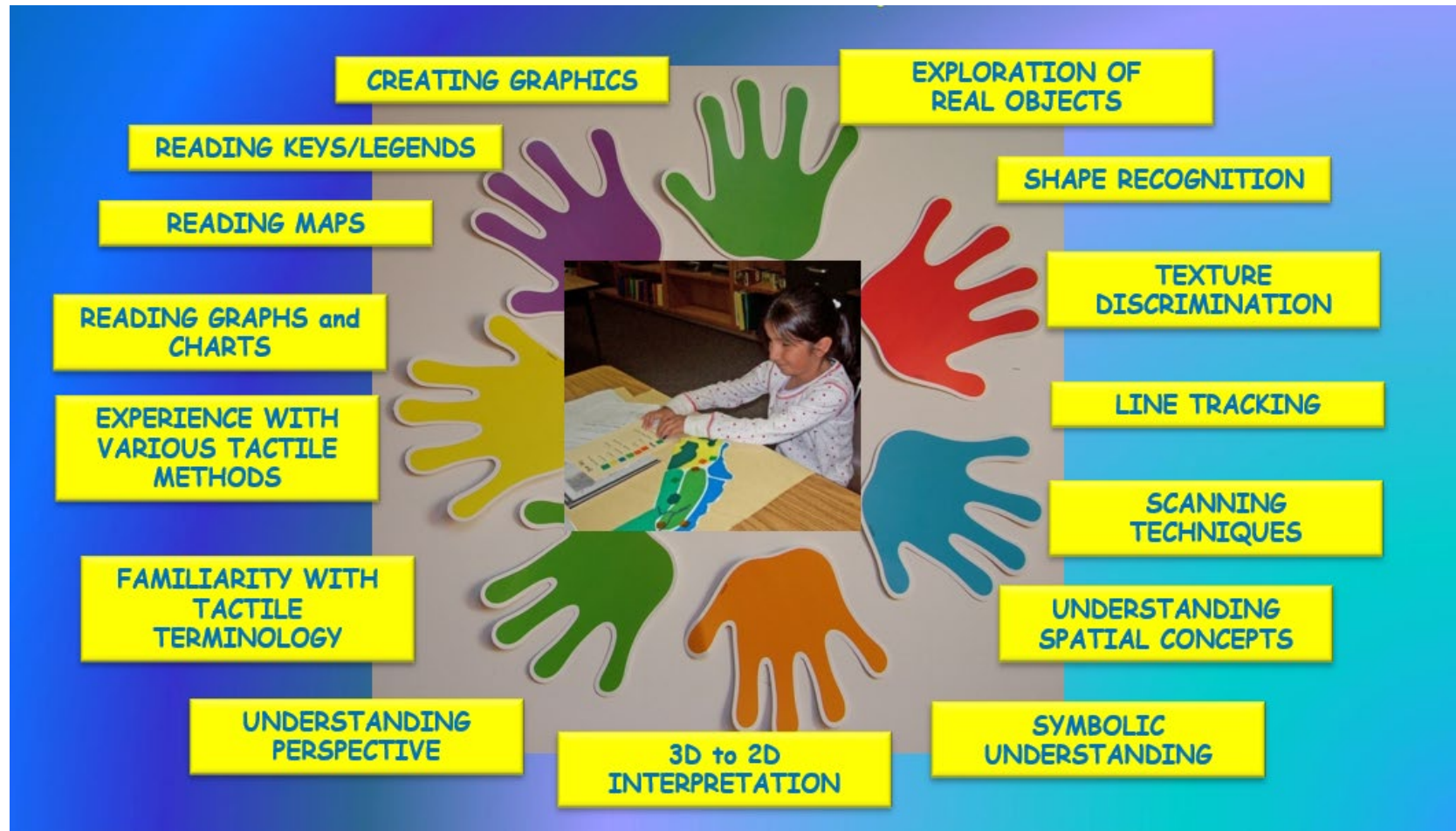
Game Example for Building Tactile Skills #7



Art Activities for Building Tactile Skills



In Summary...



TACTILE SKILLS MATRIX

Available on APH Website:

<https://sites.aph.org/tactile-skills/>



sites.aph.org Search

Tactile Skills Matrix

- Braille Awareness
- Creating Graphics
- Exploration of Real Objects
- Familiarity with TG Methods
- Hand Skills
- Line Tracking
- Part-Whole Relationships
- Reading Charts and Tables
- Reading Graphs
- Reading Maps
- Shape Recognition
- Spatial Understanding
- Symbolic Understanding
- Systematic Scanning
- Texture Discrimination
- Transition from 3D to 2D
- Understanding Perspective
- Using Keys and Legends

Tactile Skills Matrix

Welcome to the **Tactile Skills Matrix**! Use this resource to locate APH products that support the development of skills and concepts that contribute to students' tactile literacy. Select any of the skills (listed alphabetically in the sidebar menu) to view a list of recommended APH products. Click on the active link for each recommended product to obtain more detailed information regarding the product's purpose, components, target population, price, and related products from APH's Shopping site.

Keep in mind the following as you use this online resource:

- You are encouraged to periodically revisit the online Tactile Skills Matrix because new products will continue to be added in the future.
- Many of the recommended APH products introduce and address multiple tactile skills and therefore appear in more than one listing.
- Tactile skills are often addressed concurrently, instead of in a sequential or linear fashion, during the use of many of the recommended APH products.
- Teachers and parents are encouraged to find alternate ways to use the recommended products to broaden the types of tactile skills introduced.
- Although intended for a specific age or grade level, many of the recommended APH products can be tailored to multiple student populations. For example, an older tactile reader might benefit from using a kit intended for a young child if he or she is new to the use of tactile graphics.

If you have additional recommendations for APH products that should be listed under each of the tactile skill areas, share your ideas with **Karen J. Poppe, Tactile Literacy Project Leader**, at kpoppe@aph.org as she continues to update this Tactile Skills Matrix.

Featured Product



[Setting the Stage for Tactile Understanding Kit: Making Tactile Pictures Make Sense](#)

ADDITIONAL RESOURCES

**BANA Guidelines for the Transcription of
Early Educational Materials from Print to
Braille**

[http://www.brailleauthority.org/early_learning/
index.html](http://www.brailleauthority.org/early_learning/index.html)



ADDITIONAL RESOURCES (CONTINUED)

APH's Tactile Graphic Image Library

<https://imagelibrary.aph.org/aphb/>



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