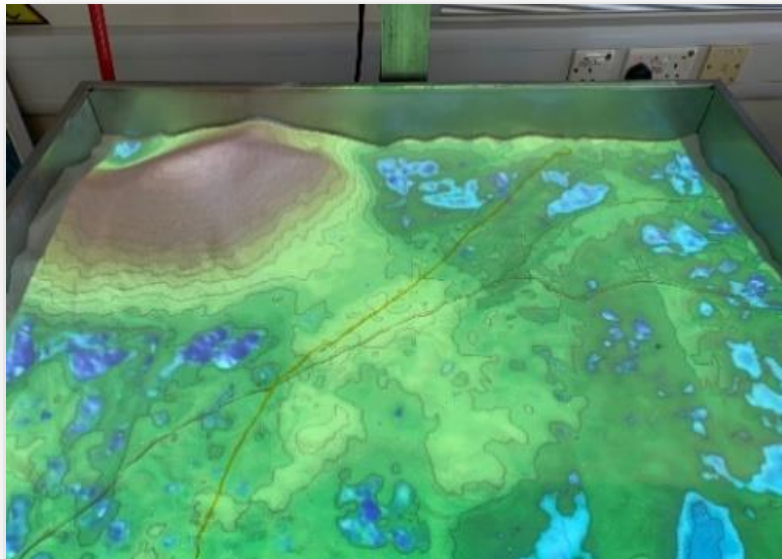


## Geography: AR Sandbox and the development of map skills

### Junior Secondary Geography Module (I): Food Problem - Can We Feed Ourselves?

<Notes to Teachers – Setting up of Augmented Reality (AR) sandbox and preparation of maps >

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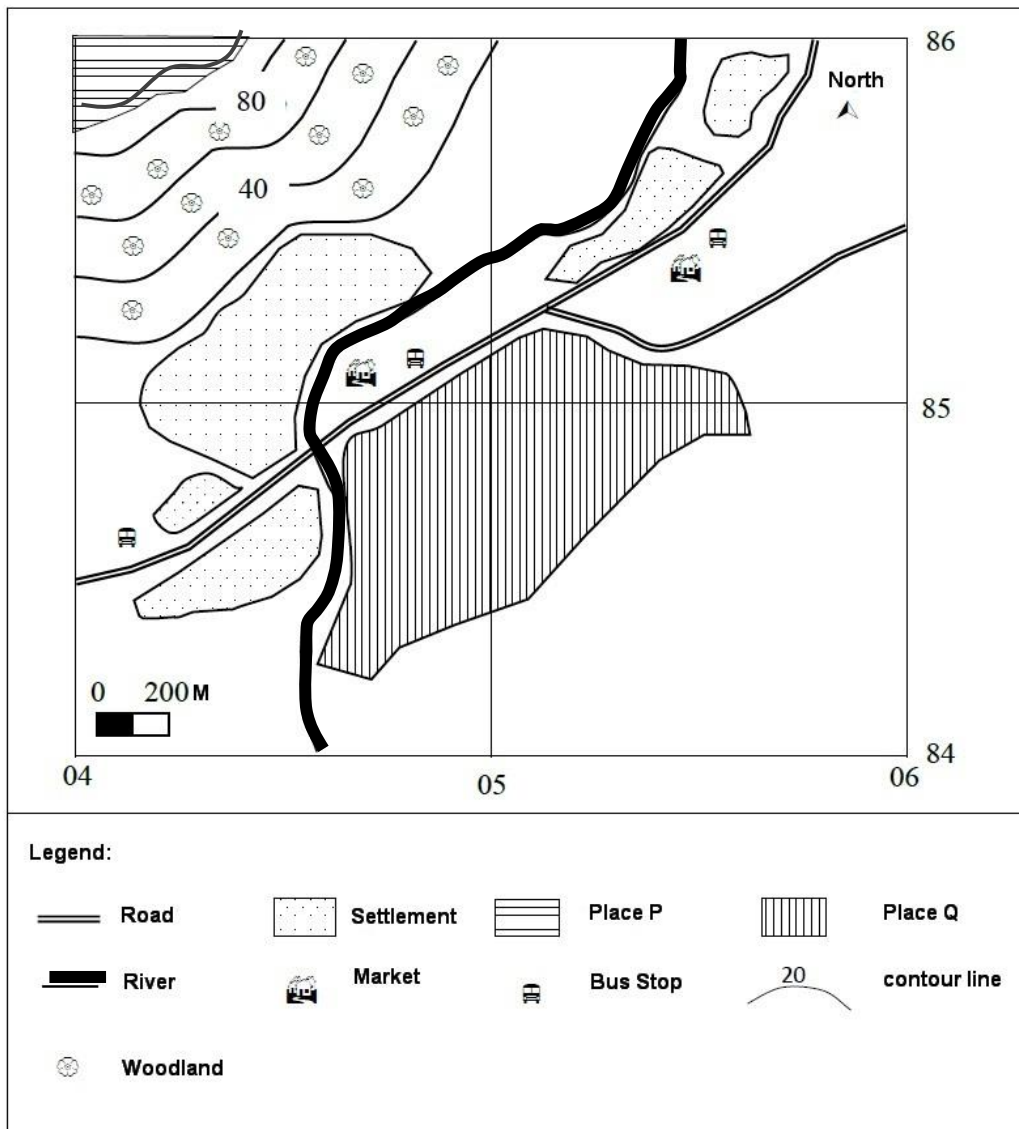
#### **1) Introduction:**

Teaching	By using this learning and teaching material, together with the
Content:	Module <i>Food Problem - Can We Feed Ourselves?</i> in the <i>Geography Curriculum Guide (Secondary 1-3)</i> , teachers can instruct students on how to choose an appropriate place for farming, and simultaneously develop their map reading and interpretation skills in a graded manner: <ol style="list-style-type: none"><li>1) Level 1: Study by using augmented reality (AR) sandbox (i.e. Graded Worksheets (level 1))</li><li>2) Level 2: Training of basic map reading skills with the use of sketch map (i.e. Graded Worksheets (level 2))</li><li>3) Level 3: Training of advanced map reading and interpretation skills with the use of Hong Kong 1:20000 paper maps (i.e. Graded Worksheets (level 3))</li></ol>
Learning Objectives:	To understand the factors affecting site selection of agricultural activities and to master some basic map reading and interpretation skills.

Required Tools: (1) AR sandbox, 2 shovels, several illustration cards, 2 ropes of different colors, and a pile of stones / pebbles  
 (2) Paper map [map excerpt from 2020 HKDSE Geography (Paper 1) / map excerpt from 2021 HKDSE Geography (Paper 1)]

AR Sandbox Mode: Natural Landscape mode

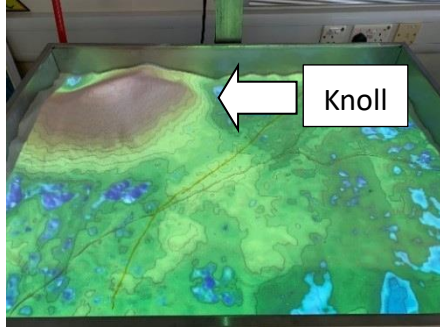
**2) Sketch Map : (Used when setting up the AR sandbox)**



### 3) Steps for setting up the AR Sandbox:

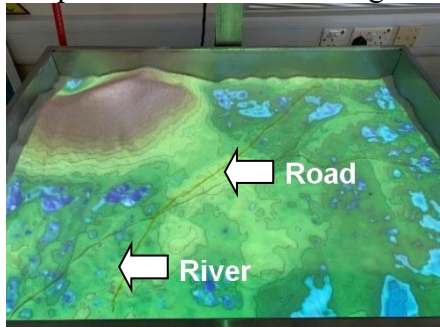
With reference to the sketch map in Part 2 of this *Teacher's Guide* and the following steps, teachers may set up the AR sandbox before the class.

Step 1: Pile up a knoll (prepared by the teacher)



Pile up a knoll in the sandbox; level other areas with a sand shovel.

Step 2: Label the string-like/ribbon-patterned landscapes (prepared by the teacher)



Mark the strip/ribbon-pattern landscapes with ropes of different colors

- River: Represented by yellow (or other colored) rope
- Road: Represented by white (or other colored) rope

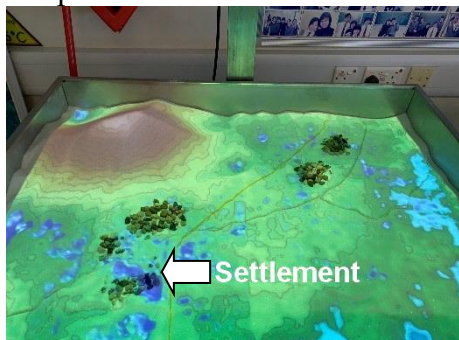
Step 3: Prepare illustration cards (prepared by the teacher)



Prepare one set of the following illustration cards for each group

- Bus Stop
- Market
- Settlement
- Place P
- Place Q

Step 4: Label different settlements (students classroom activities (I))



Invite students to locate some settlements by piling up the stones according to the information in the sketch map (P.2)

**Step 5: Label the items (students classroom activities (II))**



Invite students to form groups and place the illustration cards in the appropriate locations in the sandbox according to the sketch map (P.2)

- Bus Stop
- Market
- Settlement
- Place P
- Place Q

**4) Illustration Cards (used for making the illustration cards)**

<p style="text-align: center;"><b>Place P</b></p>	<p style="text-align: center;"><b>Place Q</b></p>	<p style="text-align: center;"><b>Settlement</b></p>
<p style="text-align: center;"><b>Bus Stop</b></p>	<p style="text-align: center;"><b>Market</b></p>	

**5) Preparation of paper map**

Teachers could prepare the following paper maps for students to complete the map reading and interpretation questions as specified in the Graded Worksheets (level 3):

- ✧ Map excerpt from 2020 HKDSE Geography (Paper 1) / map excerpt from 2021 HKDSE Geography (Paper 1)