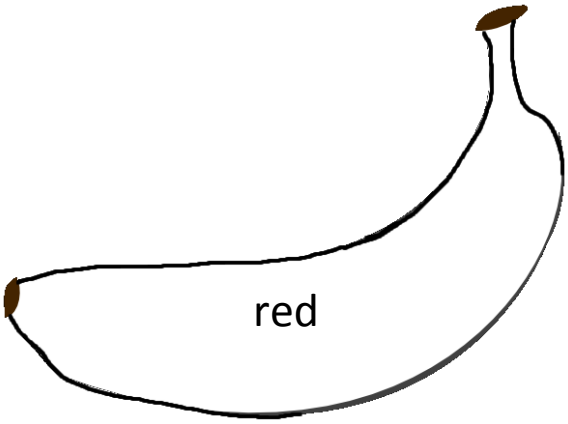
Advanced Tutorial: Images

This tutorial will modify the Tutorial.es3 experiment file created in the Getting Started Guide to present images. The task is based on a variant of the Stroop effect, examining the effect of congruence of a color word with the naming of the intrinsic color of an object presented by an achromatic line-drawing (e.g., the word “red” upon the picture of a banana).



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Task 1: Open Tutorial.es3 and save to a new filename

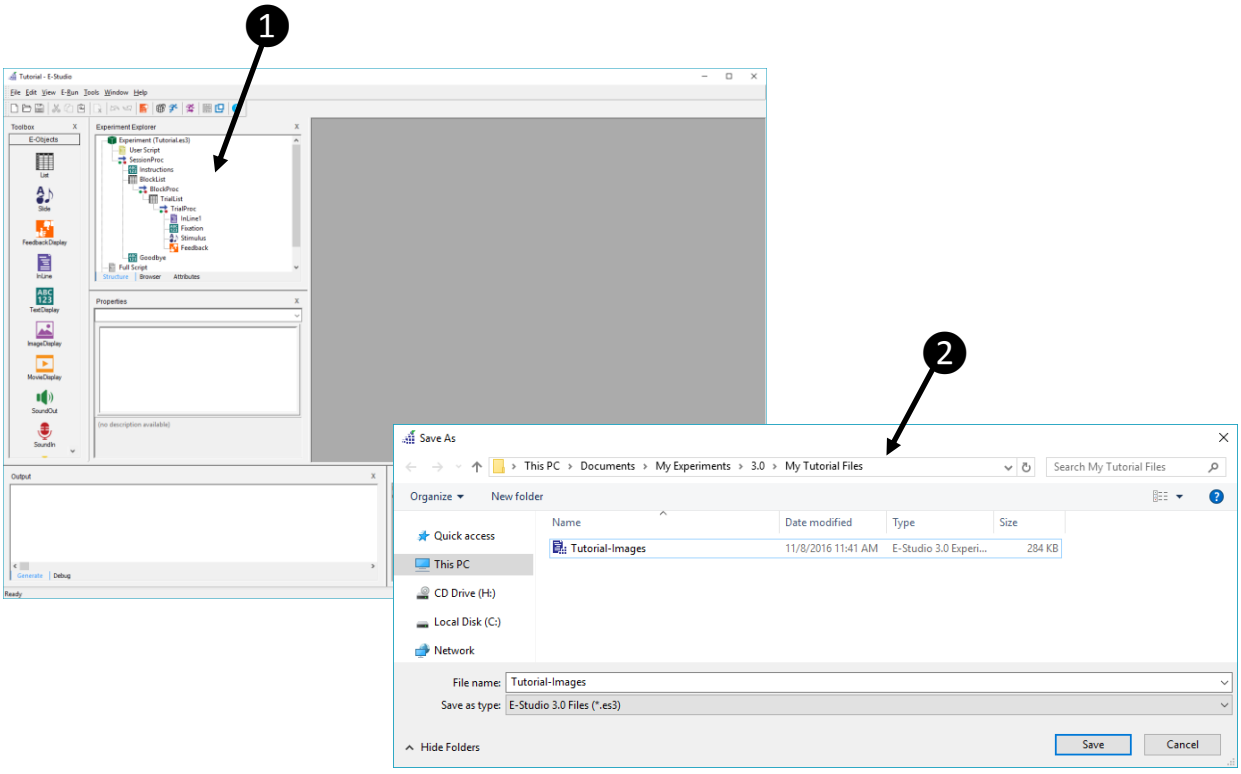
This task will build upon the experiment file created in the Getting Started Guide (i.e., Tutorial.es3). A completed version of the Tutorial experiment (AdvancedTutorialStart.es3) is included as part of the E-Prime installation in (\Documents\My Experiments\3.0\Tutorials).

1) ***Open*** the **Tutorial.es3** experiment file in E-Studio and ***review*** the **structure** of the experiment in the Experiment Explorer window.

   Open the .es3 file created while working through the Getting Started Guide (Tutorial.es3), or use the completed version of the file included in the E-Prime installation as the starting point (AdvancedTutorialStart.es3). The experiment provides instructions to the subject, followed by a series of trials presenting a fixation, a stimulus, and feedback regarding response accuracy and reaction time.

2) ***Save*** the Tutorial.es3 experiment file as **Tutorial-Images.es3**.

   Use the Save As command from the File menu. The \Documents\My Experiments\3.0 folder is a good place to create sub-folders (e.g., \My Tutorial Files) to organize your experiments for convenient access.



Task 2: Modify the instructions

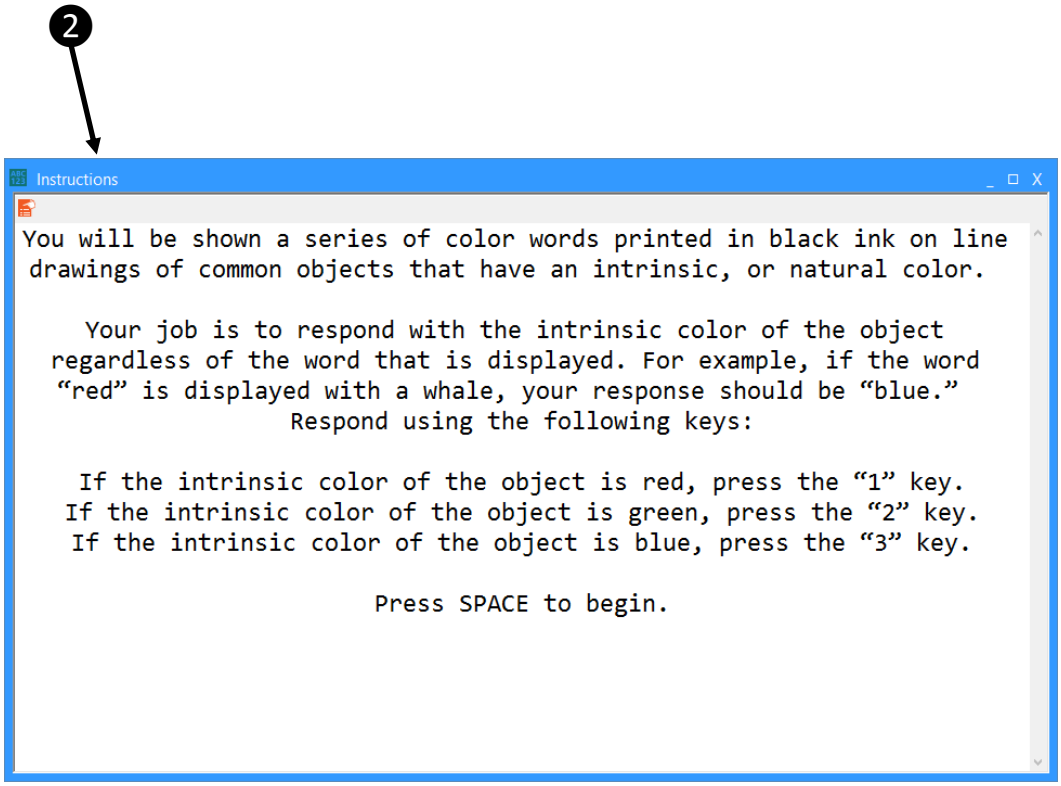
1) Open the Instructions object in the workspace, and modify the instructions to be relevant to the new task.

The tasks in this tutorial will modify the Stimulus object to present a line drawing displayed with a color word. The task will be to name the intrinsic color of the object. Enter the following instructions in the Text field:

You will be shown a series of color words printed in black ink on line drawings of common objects that have an intrinsic, or natural color. Your job is to respond with the intrinsic color of the object regardless of the word that is displayed. For example, if the word "red" is displayed with a whale, your response should be "blue." Respond using the following keys:

If the intrinsic color of the object is red, press the "1" key.
If the intrinsic color of the object is green, press the "2" key.
If the intrinsic color of the object is blue, press the "3" key.

Press SPACE to begin.



Task 3: Modify the TrialList

This task will modify the TrialList to organize the images to be presented in a trial level attribute (i.e., "Picture").

1) ***Open*** the **TrialList** object in the workspace.

   In the next few steps, an attribute will be added to store the information for the images, and the InkColor attribute will be renamed to be relevant to the current experiment.

2) ***Add*** an attribute to the TrialList and ***name*** it **Picture**.

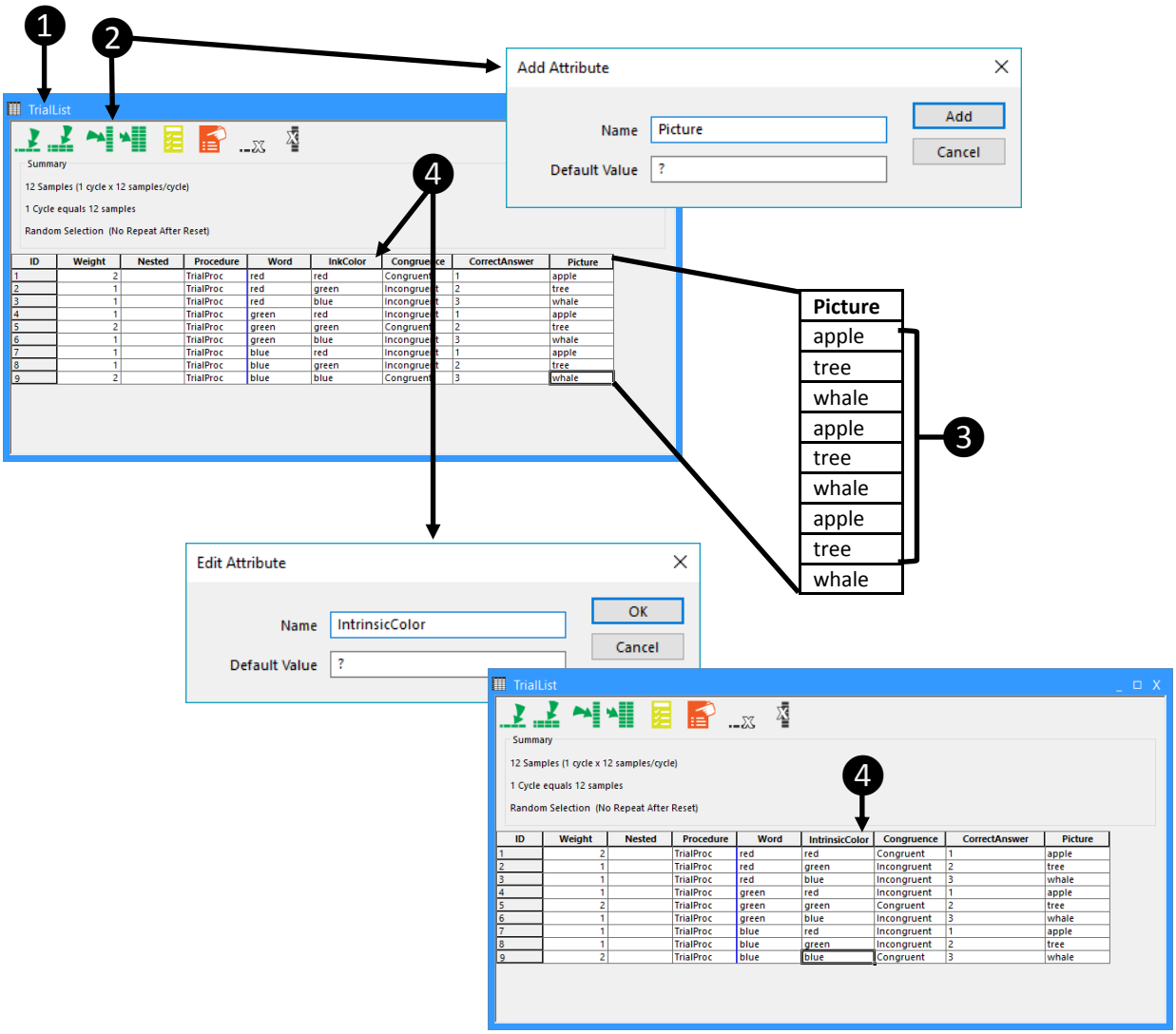
   Three images with intrinsic colors (i.e., apple, tree, whale) are provided as part of the E-Prime installation and will be used for stimulus presentation during the trials.

3) ***Enter*** values in the **Picture** column/attribute as indicated in the image of the TrialList below.

   Notice that the value of the Picture attribute corresponds to the value in the InkColor attribute (i.e., apple=red, tree=green, whale=blue).

4) ***Double click*** the header of the **InkColor** column/attribute, and ***rename*** it to **IntrinsicColor**.

   The Edit Attribute dialog will be displayed allowing you to rename the attribute in the Name field. The values originally entered for InkColor are appropriate for IntrinsicColor and do not need to be modified.



Task 4: Locate and Place Resource Files

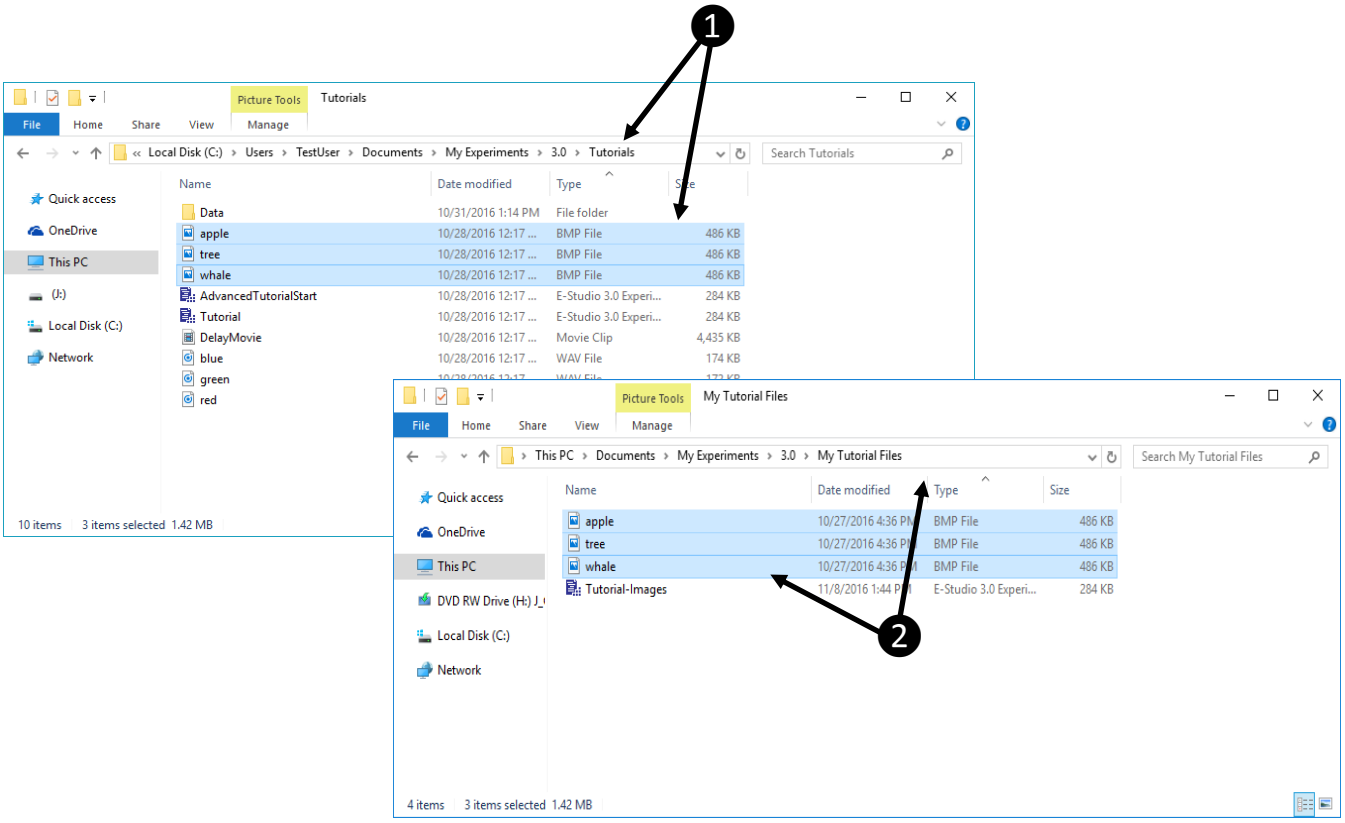
This task will copy the image files from their location as part of the E-Prime installation to the folder in which the experiment file is located.

1) Using Windows Explorer, ***locate*** the **image files** needed for the experiment, and ***right-click*** to **copy** them to the clipboard.

   The apple.bmp, tree.bmp, and whale.bmp files are installed to \Documents\My Experiments\3.0\Tutorials, and must be copied to the experiment folder.

2) ***Navigate*** to the **experiment folder**, and ***right-click*** to **paste** the image files.

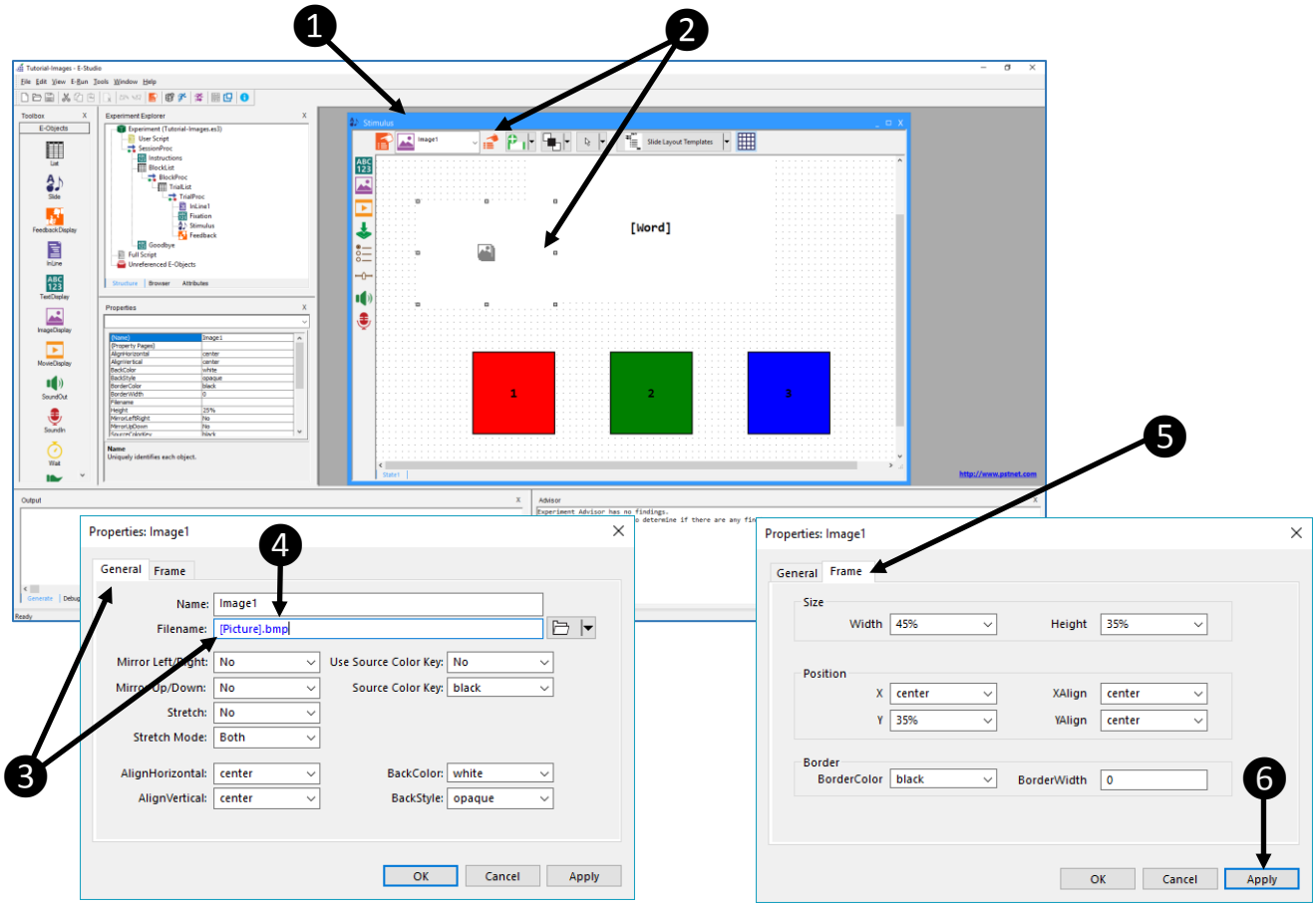
   All resource files required by an experiment file must either be placed in the folder with the experiment file, or the experiment file must be directed to their location.



Task 5: Add a SlideImage Sub-object

This task will add a SlideImage sub-object to the Stimulus object in order to present the images during the trial.

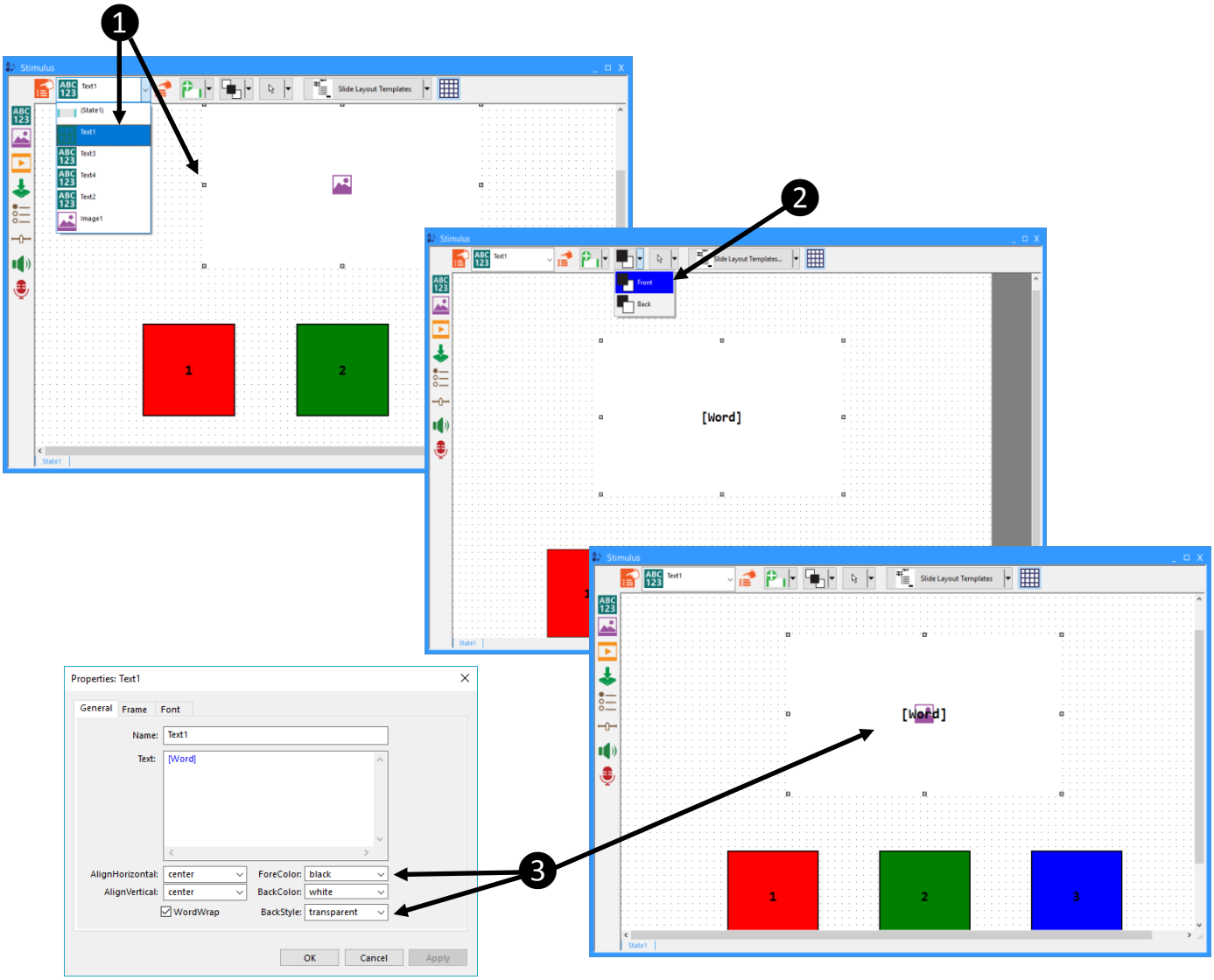
1) Returning to E-Studio, ***open*** the **Stimulus** object in the Workspace.
   The Stimulus object currently contains multiple SlideText sub-objects to present a text stimulus and provide response options. The next step will add a SlideImage object to allow presentation of the image.
2) ***Add*** a **SlideImage** sub-object to the Stimulus object and display the properties for the sub-object.
   A SlideImage sub-object (i.e., Image1) will be added to the SlideState (i.e., State1).
3) On the General tab, ***enter*** a reference to the **Picture** attribute in the Filename field.
   Recall that the Picture attribute on the TrialList contains the names of the images that will be displayed during each trial. If the actual filename is entered in the Filename field, the bitmap will be displayed in the sub-object. If an attribute reference is entered, a placeholder bitmap is displayed, since the actual file to be displayed would not be determined until run-time.
4) In the Filename field, ***append*** "**.bmp**" to the attribute reference.
   At runtime, the value of [Picture] is resolved (i.e., to "apple," "tree," or "whale"), and ".bmp" is appended to indicate the full name of the image file to use. Alternatively, the full name of the image file (e.g., "apple.bmp") could be entered into the TrialList as the value for the Picture attribute.
5) ***Select*** the **Frame** tab and set the properties as indicated in the image below to resize and reposition the sub-object.
   The SlideImage sub-object will be placed in the same position as the SlideText sub-object. In the next task, we will reset some properties of the SlideText sub-object so that the text overlays the image.
6) ***Apply*** the sub-object **properties**, and ***close*** the Image1 **property pages**.
   The SlideImage sub-object will be placed in the same position as the SlideText sub-object. In the next task, we will reset some properties of the SlideText sub-object so that the text overlays the image.



Task 6: Configure the SlideText Sub-object

This task will reconfigure the SlideText sub-object (Text1) to overlay text on the image during trial presentation.

1) In the Stimulus object, ***select*** the **Text1** from the sub-object dropdown menu.
   The selection handles will indicate selection of the Text1 sub-object, but Text1 cannot be seen because it is positioned behind the SlideImage sub-object.
2) From the z-order dropdown menu, ***select*** the **Front icon**.
   The Text1 sub-object will be repositioned in front of the SlideImage sub-object to display the [Word] attribute.
3) ***Display*** the **Property Pages** for the **Text1** sub-object. On the General tab, ***modify*** the **ForeColor** property to "**black**" and ***set*** the **BackStyle** to "**transparent**."
   Setting the Text1 BackStyle to transparent permits the display of both the text and the image.

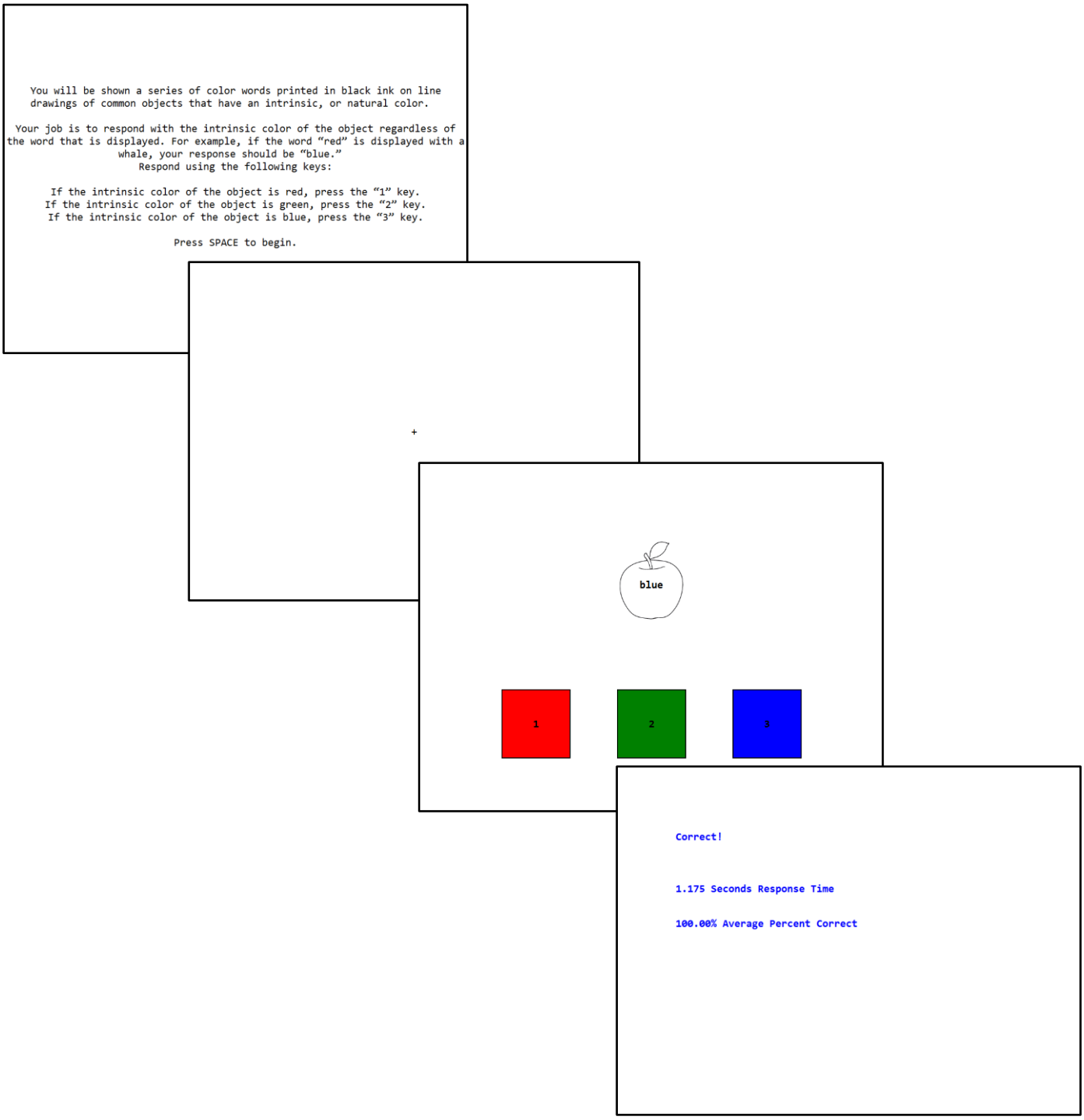


Task 7: Test the Experiment

This task will run the experiment file in E-Studio to test the modifications.

1) ***Click*** the **Run** button (or press F7) to test the experiment.

   As in the experiment used as a template (i.e., Tutorial.es3 or AdvancedTutorialStart.es3) the Tutorial-Images.es3 experiment will run a series of trials presenting a Stroop task. This variation of the Stroop experiment will present a color word (e.g., "blue") overlaid on top of a line drawing of an object (e.g., "apple") having an intrinsic color. The task is to respond to the intrinsic color of the object using the keyboard, and feedback will be provided concerning reaction time and accuracy.



Task 8: Examine Results

This task will view the data file generated by the test run, and perform an analysis.

1) ***Open*** the **data file** in E-DataAid and use ***Arrange Columns*** to **limit the display** to desired variables.

   As in the experiment used as a template (i.e., Tutorial.es3 or AdvancedTutorialStart.es3) the Tutorial-Script.es3 experiment will run a series of trials presenting a Stroop task. This variation of the Stroop experiment will present a fixation of varying duration prior to the stimulus.

2) Perform any desired analysis using the Analyze command.

   The analysis defined below examines the average reaction time in response to the stimulus by congruence (when comparing Word and IntrinsicColor).