



CATIA V5 Training Exercises

CATIA Freestyle Sketch Tracer

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EDU_CAT_EN_FSK_FX_V5R19

Student Notes:

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Master Exercise: Sea Car

In this exercise you will create sketches which represent the side and top views of the Sea Car and then position the sketches.

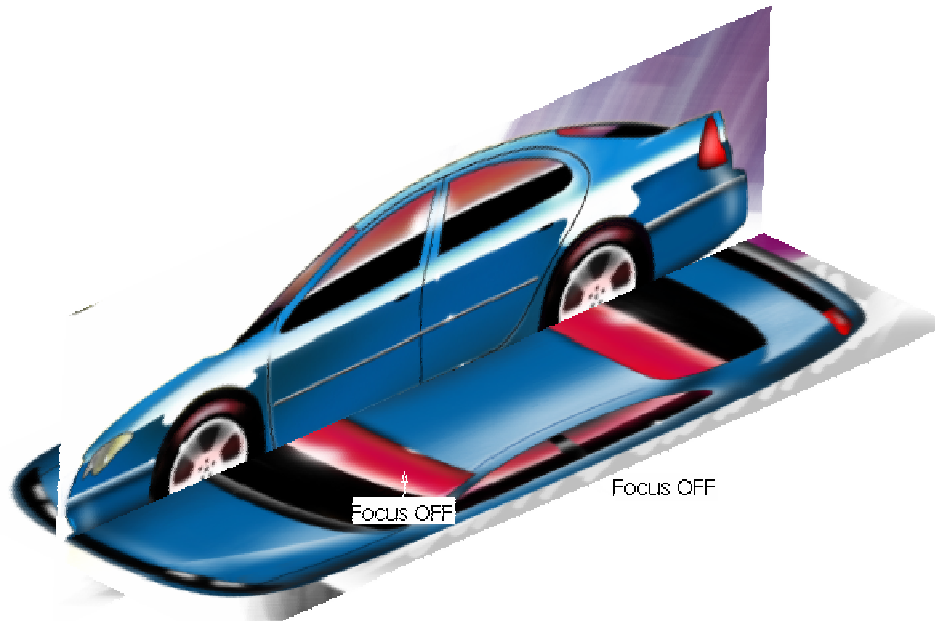
- **Sea Car: Exercise Presentation**
- **Step 1: Creating the First Sketch**
- **Step 2: Creating the Second Sketch**

Sea Car –Sketch Tracer

Master Exercise Presentation



In this exercise you will create sketches which represent the top and side views of Sea Car. To do so you will have to create Immersive sketches, position the sketches and define the size of the sketches.



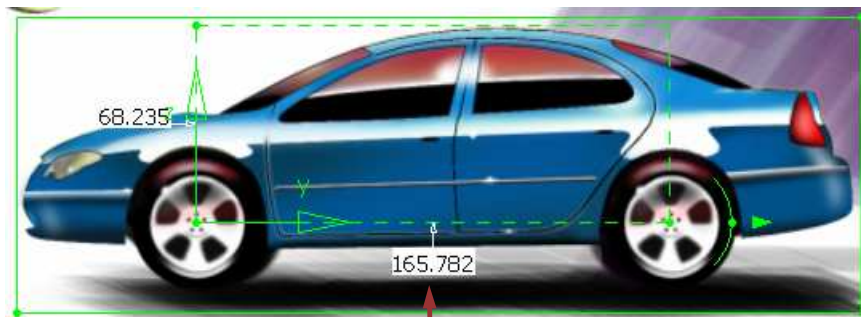
Student Notes:

Student Notes:

Sea Car: Design Intent

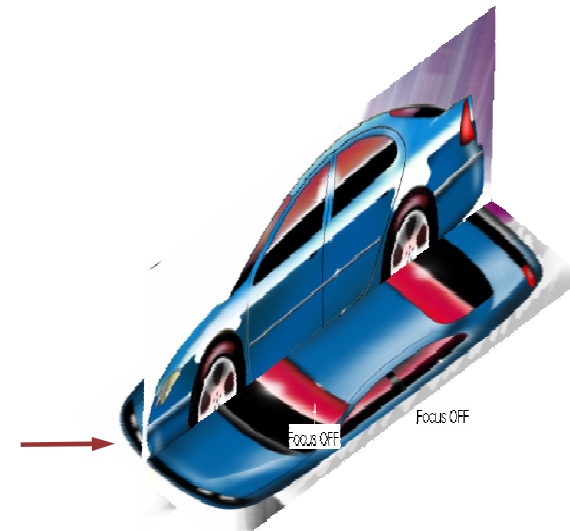
In this exercise you will import two images which represent the side and top view of the car.

- Orient both the images perpendicular to each so that they will represent top view and side view in the 3D space of model.
- Define the size of the sketch. For this, you can use one of the known length parameters. In this example the wheelbase is used.
- Position both images so that they are aligned properly.



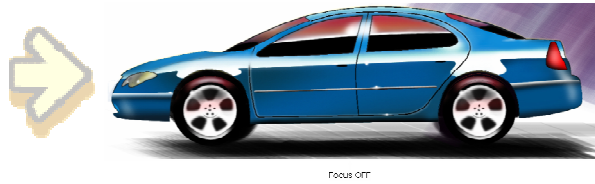
Defining size of the Sketch

Alignment of Sketches

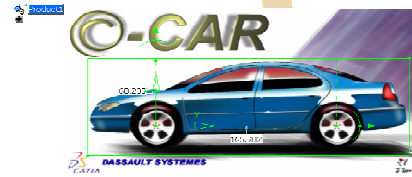


Student Notes:

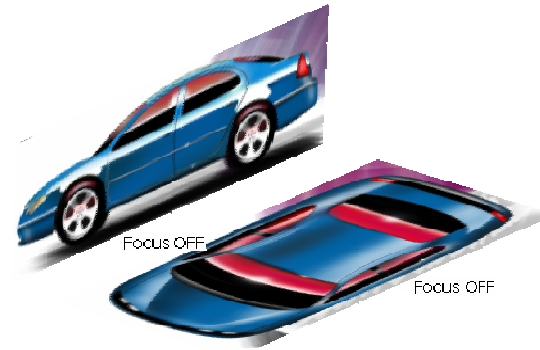
Sea Car: Design Process



1 Create an Immersive Sketch representing Side view of the Sea Car and position the Sketch.



2 Create an Immersive Sketch representing Top view of the Sea Car and position the Sketch.



Sea Car –Sketch Tracer

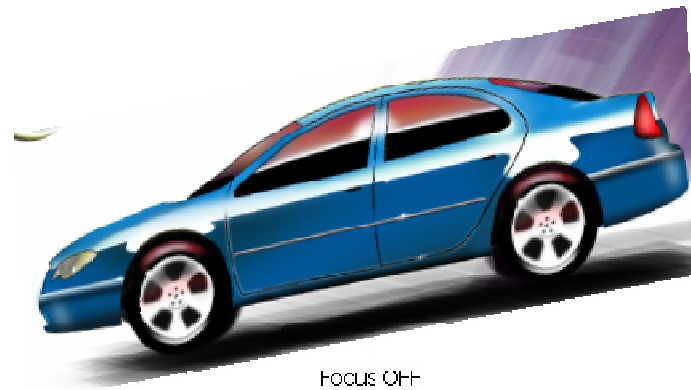
Step 1 – Creating the First Sketch



10 min

In this step you will:

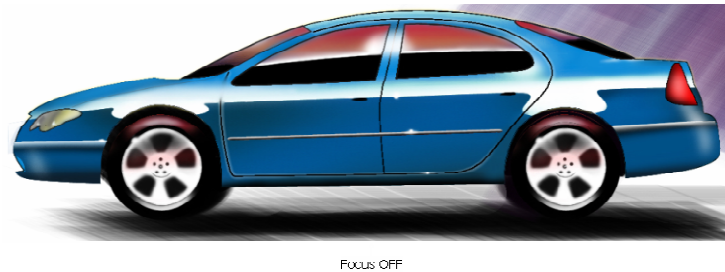
- Import “SEA_CAR_SIDE.jpg”
- Position the sketch
- Define the size of the sketch



FOCUS OFF

Do It Yourself

- ◆ Create a new product.
- ◆ Create the first sketch:
 - ◆ Select 'Shading with Material' view mode.
 - ◆ Select 'Front View' mode.
 - ◆ Import the image "SEA_CAR_SIDE.jpg".
- ◆ Position and define the size of the sketch:
 - ◆ Use the 'Use a cube' option in the 'Sketch Parameters' dialog box.
 - ◆ Use the positioning manipulators to set the correct box size for the sketch.
 - ◆ Set the length of car 1700mm. (use dimension menu on horizontal manipulator).
- ◆ Trim the sketch:
 - ◆ Trim the Sketch to the required size using the green outer manipulator.



You can compare your results with the attached document 'CATFSK_SeaCar_step1_end.CATProduct'.

Student Notes:

Sea Car –Sketch Tracer

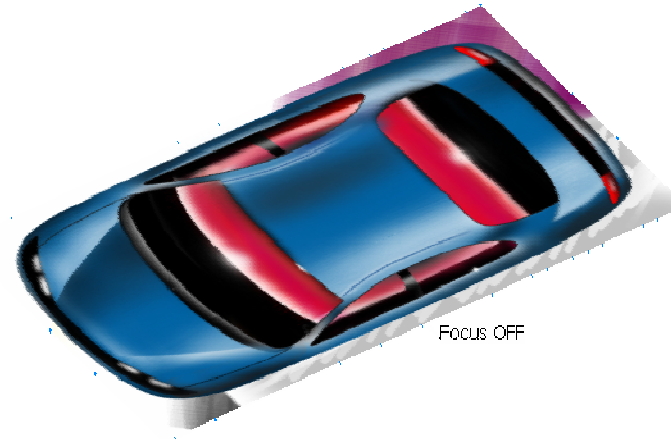
Step 2 – Creating the Second Sketch



10 min

In this step you will:

- Import “SEA_CAR_TOP.jpg”
- Position the sketch
- Define the size of the sketch



Do It Yourself

 Load the part: CATFSK_SeaCar_Step2_begin.CATProduct

• Create the Sketch:

- ◆ Select 'Top View' mode.
- ◆ Use 'Create an Immersive Sketch' tool.
- ◆ Import the sketch "SEA_CAR_TOP.jpg".

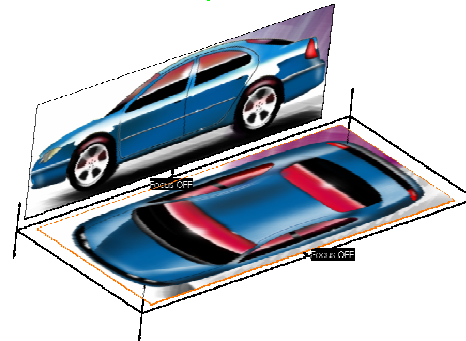
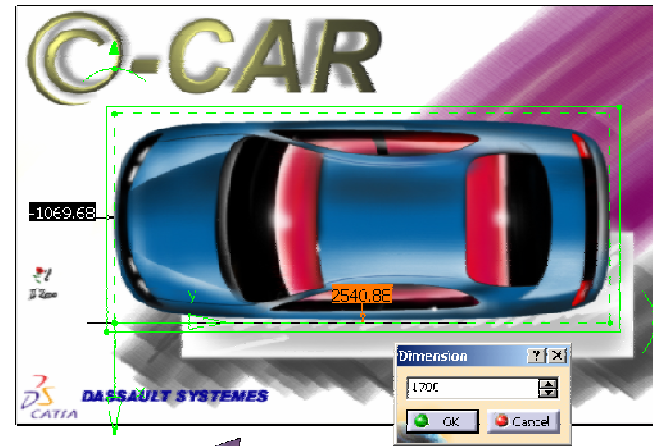


• Position and define the size of the sketch.

- ◆ Use the 'Use a cube' option in the 'Sketch Parameters' dialog box.
- ◆ Use the positioning manipulators to set the correct box size for the sketch.
- ◆ Set the length of car 1700mm. (use dimension menu on horizontal manipulator).

• Trim the sketch.

- ◆ Trim the Sketch to the required size using the green outer manipulator.



 You can compare your results with the attached document "CATFSK_SeaCar_step2_end.CATProduct"