

Name: _____

Date: _____



Design Something!

READ THROUGH THE FOLLOWING SCENARIOS AND CHOOSE ONE. COMPLETE THE QUESTIONS AND ACTIVITIES FOR THAT SCENARIO. HAVE FUN!

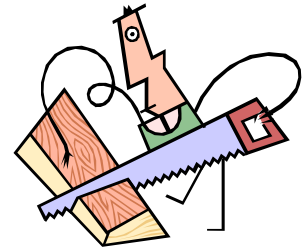
Scenario #1

Skateboarding Park!

A LOCAL COMMUNITY HAS ASKED YOU, A PRO SKATEBOARDER, TO HELP THEM DESIGN A NEW SKATE PARK. THEY WANT TO USE AN OLD PARKING LOT AND MAKE THE MOST OF THE SPACE THEY HAVE. THE PARKING LOT IS 60 METRES BY 40 METRES IN SIZE. THE COMMUNITY WANTS TO HAVE A VARIETY OF SKATEBOARDING EQUIPMENT FOR SKATERS TO ENJOY SAFELY.

Scenario #2

Amusement Park Ride



A MAJOR THEME PARK HAS APPROACHED YOU, A FAMOUS DESIGNER, ABOUT HELPING THEM DESIGN A NEW THEME PARK RIDE. THEY ARE TEARING DOWN AN OLD RIDE AND WANT YOU TO DEVELOP A THEME AND A RIDE TO REPLACE IT. THEY WANT THE THEME TO BE SOMETHING CURRENT AND POPULAR THAT WILL ATTRACT PEOPLE OF ALL AGES! THE OLD RIDE WAS 600 BY 600 METRES.

Scenario #3

MUSIC CONCERT!

YOUR FAVORITE BAND HAS ASKED YOU, THEIR MOST LOYAL FAN, TO HELP THEM TO DESIGN A NEW STAGE FOR THEIR CONCERTS. THE STAGE DESIGN MUST INCLUDE ALL THE PYROTECHNICS AND PROPS APPROPRIATE FOR ONE OF THEIR CONCERTS. THE STAGE IS 50 BY 50 METRES. THE CONCERT RUNS FOR 2 HOURS.

Scenario #4

PreSchool Playground

A LOCAL NURSERY SCHOOL/DAYCARE HAS ASKED YOU, A FORMER STUDENT, TO HELP THEM DESIGN A NEW PLAY PARK. IT HAS TO BE FUN AND SAFE FOR CHILDREN AGED 2-5 YEARS OLD. THE PARK IS 60 BY 40 METRES.

Choose one Scenario before continuing

Name: _____

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ANSWER THE FOLLOWING QUESTIONS:

1) WHICH SCENARIO did you CHOOSE? _____

2) DESCRIBE WHAT you HAVE TO do? _____

3) HOW MANY SQUARE FEET do you HAVE TO work with? (*Multiply THE TWO NUMBERS*) _____

4) LIST THE IMPORTANT FEATURES your DESIGN SHOULD HAVE:

5) WHAT SAFETY FEATURES SHOULD your DESIGN HAVE?

MATERIALS CHART

MATERIAL	DESCRIPTION	USES	COST PER SQUARE METRE
Wood	Fairly STRONG AND CHEAP. VERY VERSATILE AND EASY TO WORK WITH	Small buildings, SMALL STRUCTURES, SIGNS.	\$5.00
PRESSURE TREATED Wood	Fairly STRONG AND MODERATELY EXPENSIVE. EASY TO WORK WITH	OUTDOOR STRUCTURES, decks	\$8.00
Brick	STRONG AND CHEAP. Difficult TO WORK WITH	FOUNDATIONS, walkways, buildings of all SIZES	\$5.00
STEEL	STRONG AND EXPENSIVE. Difficult TO WORK WITH	LARGE BUILDINGS, OUTDOOR STRUCTURES, SCAFFOLDING.	\$10.00

Name: _____

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OTHER COSTS

MATERIAL	USES	COSTS
PYROTECHNICS	FIREWORK displays, STAGE SHOWS	\$5.00 PER EXPLOSION
MOTORS	VEHICLES, ANIMATED EQUIPMENT, CRANES	\$5000 PER MOTORIZED ITEM
LIGHTING	PROVIDE LIGHT FOR NIGHT USE, LIGHT STAGES	\$1000 PER LIGHT POLE (ONE POLE WILL LIGHT 1000 SQUARE FEET).

START DESIGNING!

TIME TO START DESIGNING. IN THE SPACE BELOW CREATE 4 INITIAL IDEAS FOR A LAYOUT FOR YOUR DESIGN. YOUR INITIAL IDEAS SHOULD BE DONE IN PLAN VIEW (AS SEEN FROM ABOVE - LIKE A MAP!). INCLUDE ALL IMPORTANT LABELS AND FEATURES.

<i>Design 1</i>	<i>Design 2</i>
<i>Design 3</i>	<i>Design 4</i>

Name: _____

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FINAL DESIGN

FOR YOUR final design you will need to look at all your initial ideas.

1) WHAT THINGS did you like about:

DESIGN 1? _____

DESIGN 2? _____

DESIGN 3? _____

DESIGN 4? _____

2) WHAT would you change about:

DESIGN 1? _____

DESIGN 2? _____

DESIGN 3? _____

DESIGN 4? _____

3) OVERALL, which design do you like the best and why? _____

LOOKING OVER YOUR ANSWERS, design a final design for your scenario in the space provided. USE THE SQUARE FOR SCENARIO 2 & 3, THE RECTANGLE FOR 1 & 4.

Name: _____

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FINAL DESIGN

Use for Scenario 2
And 3

600 or 50 metres

60 metres

600 or 50 metres

Use for scenario 1 and 4

40 metres

Your Final Design
must be **neat,**
coloured and
labeled! Use a
ruler for lines!

COSTS

USING THE MATERIALS LIST ON THE PREVIOUS PAGES TRY TO CALCULATE THE COST OF THE SCENARIOS THAT YOU DESIGNED. START BY FIGURING OUT THE SIZE OF EACH FEATURE - LENGTH TIMES WIDTH THEN DECIDING WHICH MATERIALS YOU ARE GOING TO USE.

FOR EVERY METRE TALL YOUR STRUCTURE IS ADD THE ORIGINAL COST AGAIN!

EXAMPLE - SCENARIO 1:

Half Pipe - 3 METRES x 4 METRES = 12 METRES SQUARE.
 MADE FROM WOOD = 12 x \$5 = \$60
 1 METRE TALL = \$60 x 2 = \$120

SCENARIO 2:

ROLLERCOASTER - 50 METRES x 200 METRES = 10000 SQUARE METRES
 MADE FROM STEEL = 10000 x \$10 = \$100,000
 30 METRES TALL = 100,000 x 30 = \$3,000,000

SCENARIO 3:

FLAMING TOWER - 4 METRES x 4 METRES = 16 SQUARE METRES
 MADE FROM STEEL = 16 x \$10 = \$160
 10 METRES TALL = \$160 x 10 = \$1600
 PYROTECHNICS = 1 EXPLOSION EVERY 5 MINUTES FOR 2 HOURS
 24 x \$5 = \$120

SCENARIO 4:

JUNGLE GYM - 4 METRES x 4 METRES = 16 SQUARE METRES
 MADE FROM PRESSURE TREATED WOOD = 16 x \$18 = \$288

YOUR COSTS:

ITEM	Size	Costs

Name: _____

Date: _____

COSTS CONT...

ITEM	SIZE	COSTS
TOTAL =		

Self EVALUATION

1) If you could do ONE THING BETTER IN THIS ASSIGNMENT WHAT WOULD IT BE?

2) WHAT WAS ONE THING THAT YOU DID DO WELL? _____

3) WHAT DID YOU ENJOY ABOUT THIS PROJECT? _____

4) WHAT WOULD YOU CHANGE ABOUT THIS PROJECT? _____

5) SHARE YOUR DESIGN WITH A PARTNER. GET THEM TO WRITE THEIR COMMENTS HERE:
