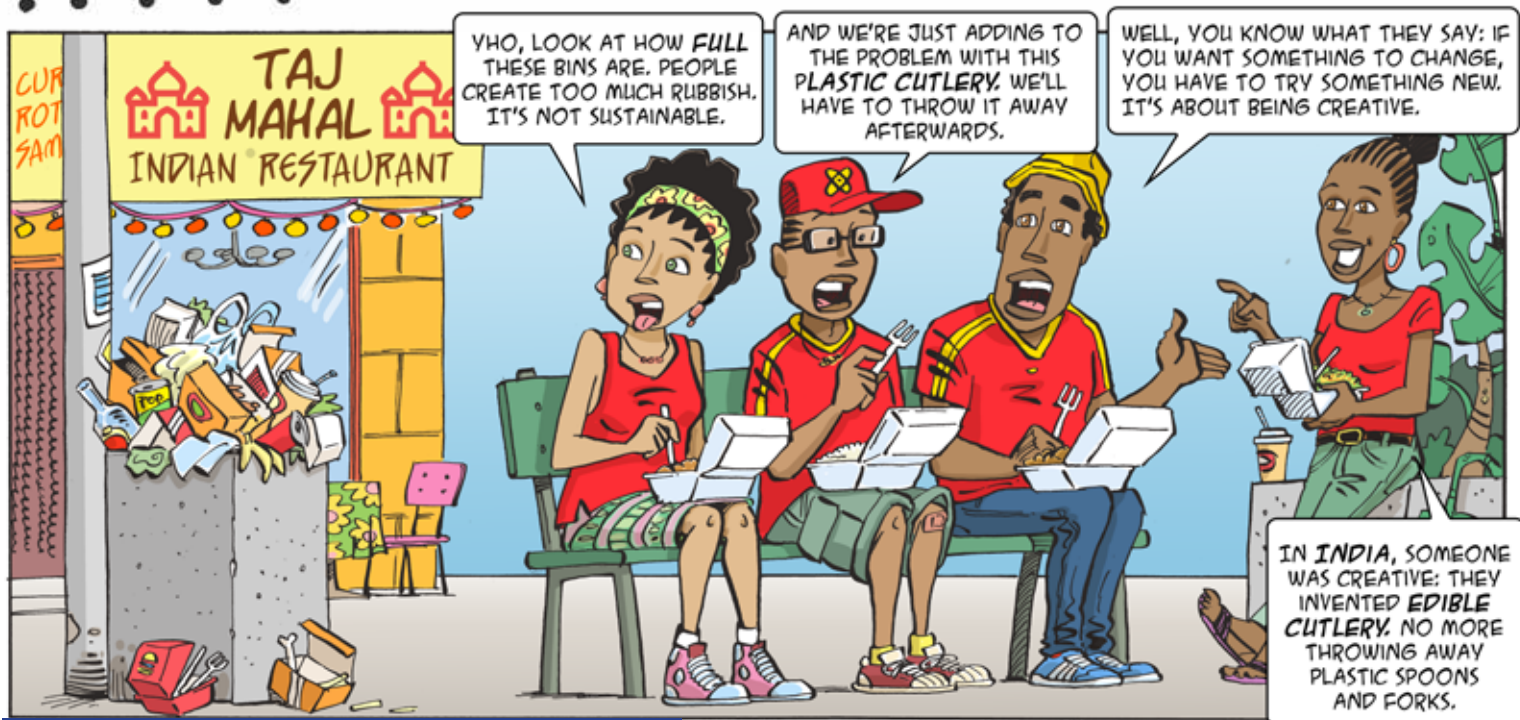




GRASSROOTS INNOVATION



SPOONS YOU CAN EAT!

Innovation

A new idea, method for doing something or product is developed to solve a problem.

Grassroots Innovation

When ordinary people create solutions to problems in their own community.

The problem:

Plastic is a great invention, but it creates HUGE amounts of waste because it is not biodegradable. Plastic cutlery is *used once* and then thrown away!

The solution:

Narayana Peesapaty From India realised the problem that plastic cutlery was causing – so he created '*edible cutlery*'. It causes no waste, because it is part of the meal! For those who do not want to eat it, it can be thrown away and will *biodegrade* within 10 days in an outside environment. Awesome! That is grassroots innovation at its best!



RECENTLY, SOUTH AFRICA HAS AGREED TO WORK WITH INDIA TO DEVELOP GRASSROOTS INNOVATION. TOGETHER THE TWO COUNTRIES WILL BE USING LOCAL KNOWLEDGE TO SOLVE LOCAL PROBLEMS.



YOU CAN BE A GRASSROOTS INNOVATOR!

1

WHAT IS THE PROBLEM?

WHAT PROBLEM IS THERE IN YOUR COMMUNITY OR HOME THAT YOU WOULD REALLY WANT SORTED OUT?

WRITE DOWN THE PROBLEM:

2

IDEAS

THINK OF SOME POSSIBLE CREATIVE SOLUTIONS TO THE PROBLEM:

- DO SOME RESEARCH AND HAVE A "THINK TANK"
- THINK OF AS MANY IDEAS AS YOU CAN
- THE IDEA YOU CHOOSE NEEDS TO BE SUSTAINABLE (IT MUST WORK INTO THE FUTURE, MUST BE AFFORDABLE FOR THE COMMUNITY, AND MUST NOT CREATE MORE PROBLEMS FOR THE COMMUNITY OR THE ENVIRONMENT)

WRITE DOWN YOUR IDEAS:

3

DESIGN AND PLAN

IF YOU SPEND SOME TIME ON THIS STEP, IT WILL SAVE YOU TIME LATER ON IN THE PROCESS.

- IF IT IS A METHOD OR PRODUCT, DRAW IT.
- WHAT ARE THE DIMENSIONS – HOW LONG, WIDE, TALL ETC. IT IS?
- WHAT ARE THE BEST MATERIALS TO MAKE IT?
- WHAT ARE THE COSTS?
- HOW AND WHEN IS IT TO BE MADE?

WRITE DOWN YOUR PLANS:

4

MAKE

THIS IS THE FUN PART...

- IF IT IS AN IDEA OR NEW METHOD, TRY IT OUT
- IF IT IS A NEW PRODUCT, BUILD A WORKING MODEL (ALSO CALLED A PROTOTYPE) – SEE IF IT WORKS.

DRAW YOUR PROTOTYPE IN THE SPACE BELOW. IF YOU NEED MORE SPACE, USE A SEPARATE PIECE OF PAPER.

5

EVALUATE

YOU MAY NEED TO GO BACK TO ANY ONE OF THE PREVIOUS STEPS. ASK YOURSELF:

- DOES IT WORK?
- CAN IT BE IMPROVED, OR IS ANOTHER IDEA BETTER?
- CAN IT BE MADE STRONGER OR CHEAPER?
- IF IT IS "GOOD TO GO", THEN START MAKING A CHANGE!

HOW CAN YOUR SOLUTION BE IMPROVED?



REMEMBER, INNOVATION IS ALSO ABOUT LEARNING FROM MISTAKES. IF AN IDEA DOESN'T WORK AT FIRST, WE LEARN WHY IT DIDN'T WORK AND HOW WE CAN IMPROVE IT.

GRASSROOTS INNOVATIONS ARE ALSO OPPORTUNITIES FOR **ENTREPRENEURSHIP!** THEY CAN PROVIDE AFFORDABLE SOLUTIONS THAT WORK FOR THE COMMUNITY AND PROVIDE A LIVING FOR THE INNOVATOR!



An **Inventor** or **Innovator** is someone who **designs and creates** new products or methods which can benefit people. They make a living by selling their ideas. These can be improvements on existing products or methods or completely new inventions.

A **Social Entrepreneur** creates a business with the aim of solving a social problem. They make money selling their products that solve a problem within a community. That's a win-win solution!



Knowledge is Ncah!

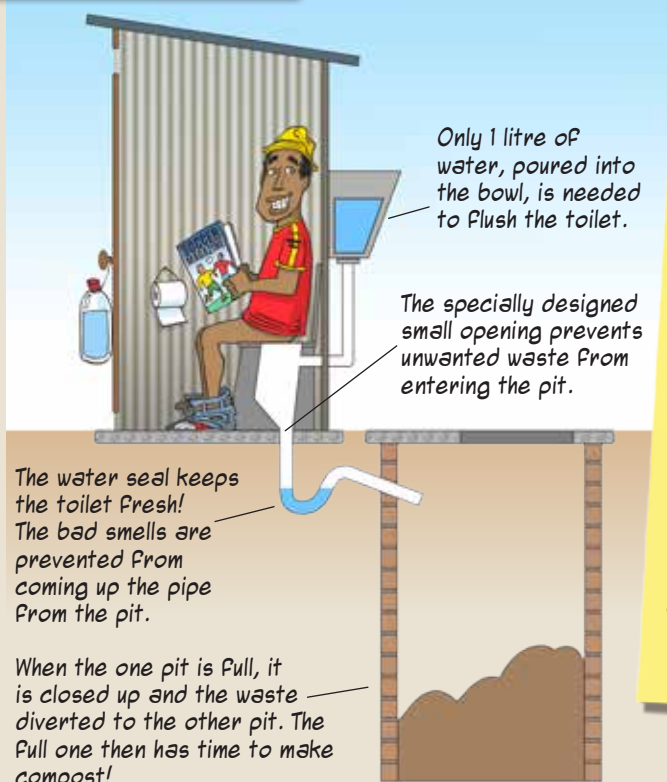
INNOVATION EXAMPLES

The problem:

Pit latrines smell bad and fill up quickly with rubbish that should not be put in them.

The solution:

The pour flush toilet



James Ntuli is a Civil Engineering Technician who works for the company Partners in Development. He holds a National Diploma in Civil Engineering. Using his skills he learned while doing his diploma, he has been able to assist in the design of the pour flush toilet for the South African context. James has also managed the construction of pour flush toilets in various communities in South Africa. The technical tests that he conducted while working on the design ultimately led to an improvement in life for many people, who now have toilets with vastly improved sanitation.

CURRICULUM LINKS

- **GRADE 7:** Technology – Design process skills
- **GRADE 7:** Economic and Management sciences – Entrepreneurship: The entrepreneur, starting a business
- **GRADE 7-9:** Technology – Investigation, Design, Communication, Making & Evaluating Skills; Indigenous Technology
- **GRADE 10:** Economics – Economic redress: Entrepreneurship

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