



Kitari Bio/MMB Mid-Project Update

Francesca Balestrieri, Jacki Edwards, Rachel Morris,
Porter Richardson, Caroline Sechler, and Wesley Turner

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01

Scope & Goals



Kitari Bio



- Newly formed LLC that develops **AI algorithms** for the **discovery of novel insecticidal proteins**
- **Mission:** address humanitarian need for insecticides that protect global infrastructure for food, fiber, fuel, and human health
- **Objectives**
 1. Segment the biological insecticide market
 2. Evaluate competitors and identify possible partnerships
 3. Identify most attractive market segments and insects to focus on
 4. Develop an initial business strategy



Project Goals

25%

Market Analysis

Potential avenues for expansion of AI algorithm use

25%

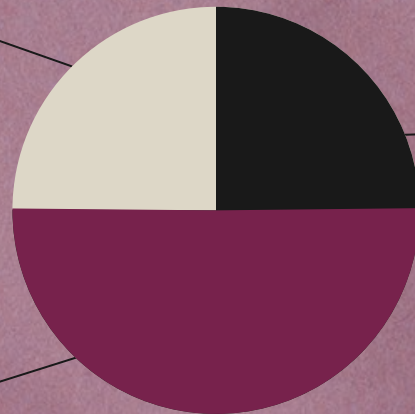
Partner/ Leaders Identification

Identify companies with genome databases that produce insecticides

50%

VOC/KOL Outreach

Understand stakeholder needs, challenges, and interest in AI homology searching



02

Current Progress



KOL and VOC Outreach Overview



01

Michael David

03

Kelly Smith

02

Thomas Anderson

04

Todd Spivey

KOL: Michael David



**Global Agricultural
Development
Corporation**

**Managing
Director of
Product
Development**

**Regulatory pressure is
driving out older chemicals**

**Trying to limit the number
of insecticide applications
needed**

**Combination approaches
are becoming
increasingly popular**



KOL: Thomas Anderson



**Entoniche
Consulting, LLC**

**Senior Government
Relations and
Regulatory
Specialist**

New mode of actions are typically the priority for research

Consumers and special interest groups are key factors in regulatory decisions made in the industry

Products are becoming more specific to limit broad spectrum off-target effects



Upcoming KOL: Kelly Smith



COO at Sable Fermentation

Principal of Lamia Consulting

**Former CEO of Pasteuria Bioscience,
Acquired by Syngenta in 2012**

- Led process development of nematicidal bacteria *Pasteuria spp.*
- May give insight into discovery of bacteria for use as pesticide

Upcoming KOL: Todd Spivey



**Technical Chemical Sales
Representative at Corteva**

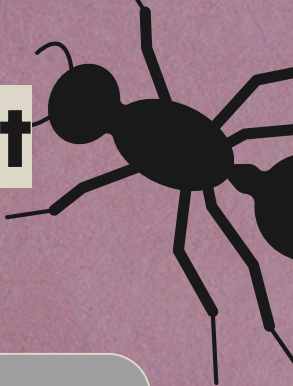
PhD in Crop Physiology

**With exception of plant-incorporated
pesticides, Corteva's insecticide
portfolio has no protein-based
biopesticides registered in NC**

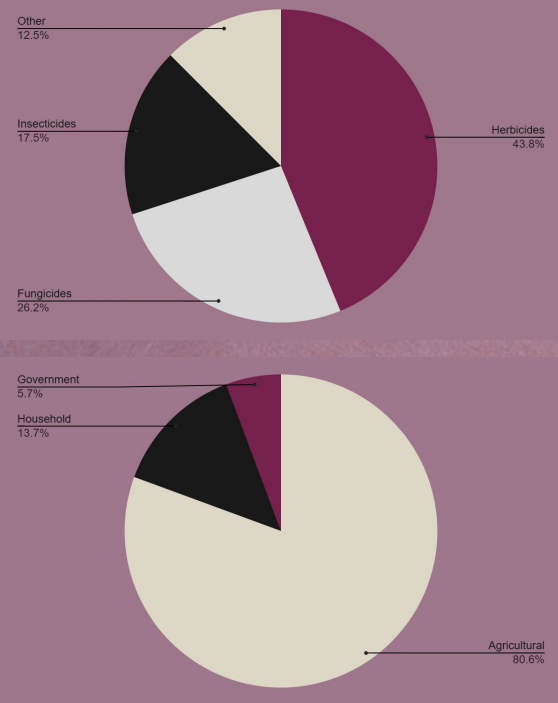
**May lead to further discussion with
insecticidal chemical discovery
personnel**



U.S. Pesticide Manufacturing Market



Market Segments:



Revenue:

\$19.8 Billion
CAGR: 4.3%

Key Drivers:

Demand from Crop Production
Consumer Spending
Agricultural Price Index

Trade-weighted Index
Regulation

Agriculture - Market



Global Ag. Pesticides

CAGR (2025-2029): 4.1%

- Herbicides, insecticides, fungicides & bactericides, other

APAC Contribution

42% of **global agricultural pesticide** market growth from APAC region

CAGR (2019-2030) for **biopesticides** in APAC is 9.3%, second highest after Latin America

Global Ag. Biopesticides

CAGR (2021-2030): 8.8%

\$7.6 bn in revenue (2021)

CAGR (2019-2030) by type:

- **Bionematicide: 9.5%**
- Bioherbicide: 8.9%
- Biofungicide: 9.3%
- **Bioinsecticide: 8.8%**

CAGR (2019-2030) by source:

- **Biochemicals: 8.7%**
- Microbials: 9.1%

Agriculture - Drivers

Eco-Friendly

Consumers want organic food that is produced safely

Climate Change

Land availability, pest spread/introduction

Emerging Markets

Latin America- Brazil quickly became world's largest soybean exporter

Gov Policies

Ban on chemical pesticides in China and similar bans across APAC



Government

Governmental policies and politics:

→ Large impact on the use of pesticides!

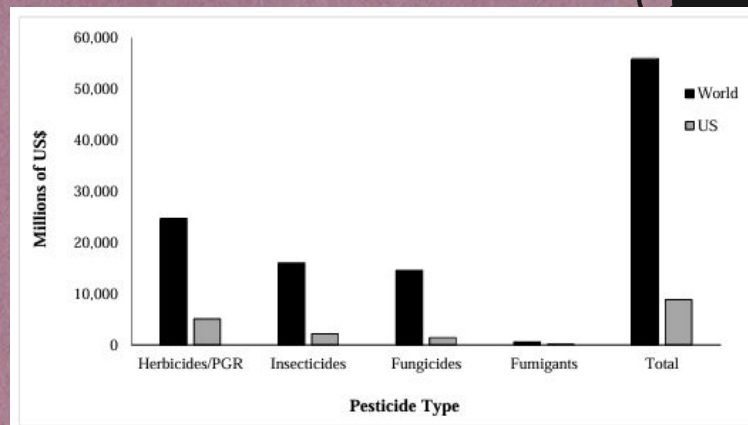
US Government

Most recent data is from 2017 regarding 2008-2012

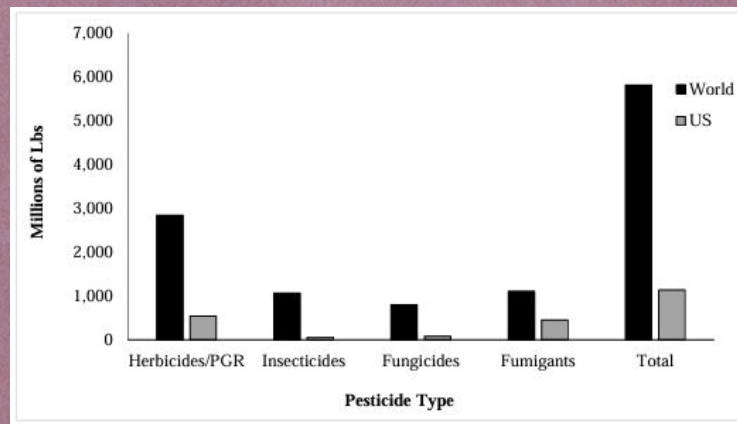
Industry/Commercial/Government Sources: Herbicides vs. Insecticides

2012:	\$460 Mil, 7% — \$700 Mill, 13%
2009:	\$470 Mil, 8% — \$708 Mil, 15%
2007:	\$480 Mil, 10% — \$715 Mil, 15%
2005:	\$460 Mil, 9% — \$675 Mil, 16%

Expenditures by Millions of US\$



Usage by Millions of Lbs



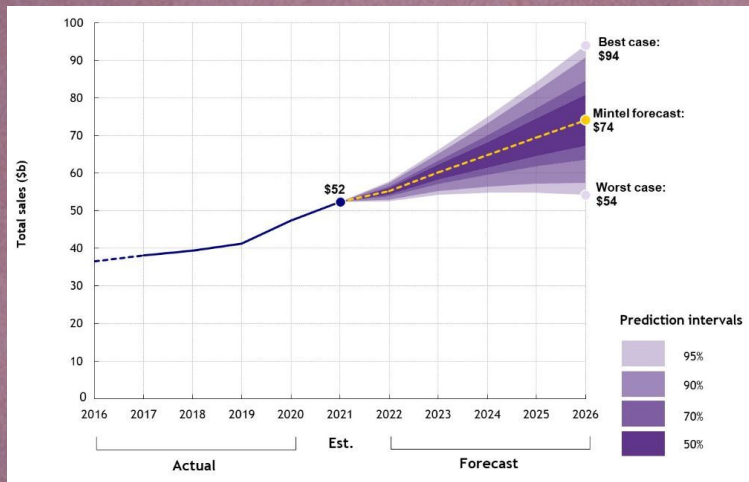
Household

Home and Garden:

- Expenditures are a majority!
- Consumers want safer weed control!

Similar to Government Expenditures:

- Same for Herbicides
- Much more for Insecticides
- COVID created an increase in home use



Home and Garden Herbicides:

2012:	\$450 Mil, 7%
2009:	\$475 Mil, 8%
2007:	\$420 Mil, 8%
2005:	\$395 Mil, 8%

Home and Garden Insecticides:

2012:	\$2,650 Mil, 50%
2009:	\$2,500 Mil, 52%
2007:	\$2,500 Mil, 54%
2005:	\$2,200 Mil, 53%



03

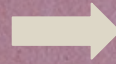
Challenges



Challenges

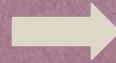


Companies exhibit concern with sharing knowledge with other private entities



Introduce the interview as a project & representation for individuals with an AI based product

Identifying & Contacting KOL's and VOC's



Utilize existing network to identify, and social media/email to contact people of interest

04

Moving Forward



Plan

The market lacks sprayable biopesticide products

Resistance has been shown with Cry proteins, Vip (Vip3A) proteins continue to have no shown resistance



Identify why biopesticide products are not more prevalent in the market



KOL and VOC Interviews

Target smaller companies to find value in Kitari Bio's collaboration and platform licensing models

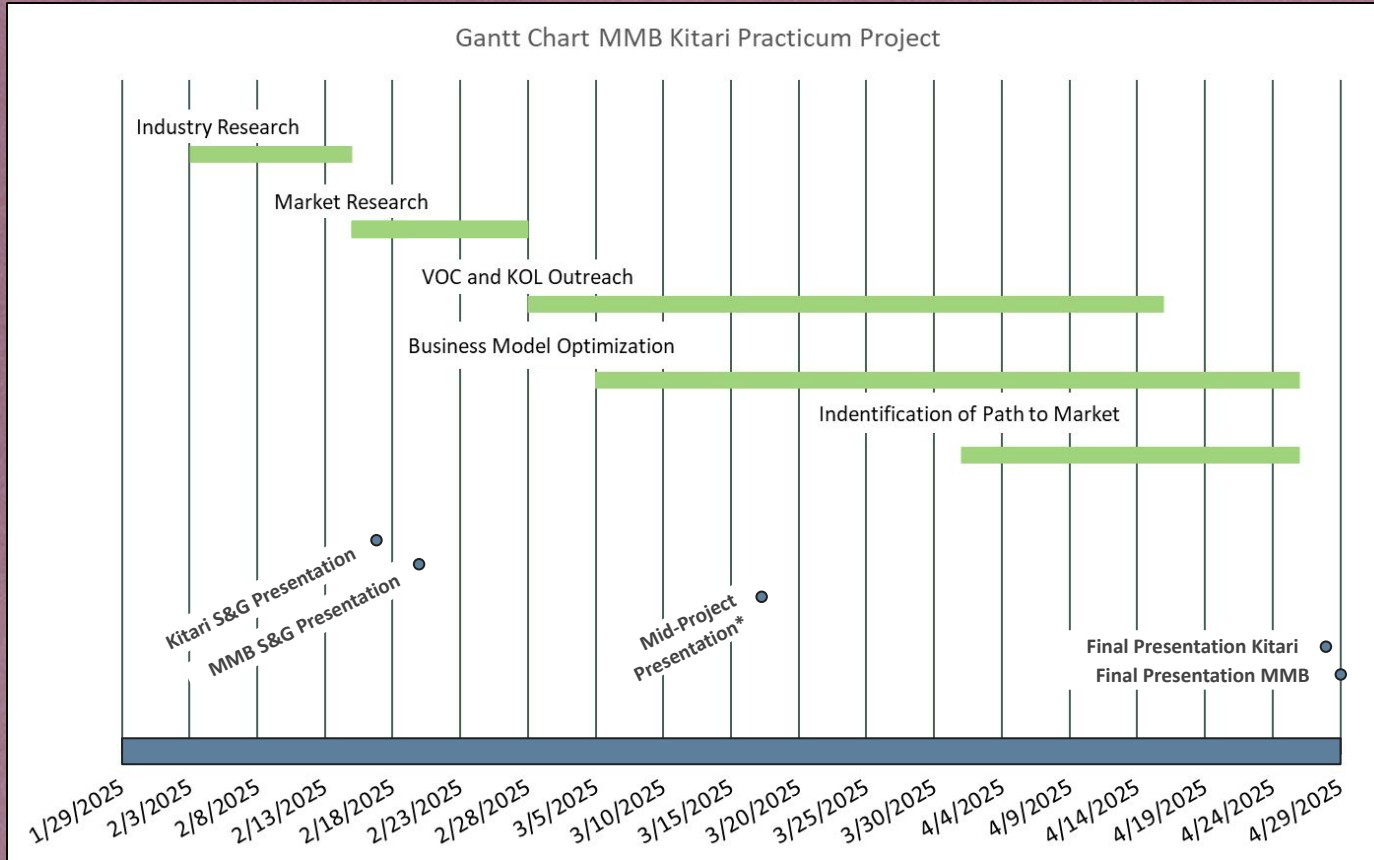


Prioritize markets that will allow Kitari Bio to disrupt insecticidal protein discovery process



1. Agricultural
2. Government
3. Household

Timeline



Thank you!

Do you have any questions?

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Agricultural

Mercury

Mercury is the smallest planet of them all

Venus

Venus is the second planet from the Sun

Mars

Despite being red, Mars is actually a cold place

Jupiter

Jupiter is the biggest planet of them all

Saturn

It's composed of hydrogen and helium

Neptune

Neptune is the farthest planet from the Sun





Introduccion

You can give a brief description of the topic you want to talk about here. For example, if you want to talk about Mercury, you can say that it's the smallest planet in the entire Solar System

The slide title goes here!

Do you know what helps you make your point clear?
Lists like this one:

- They're simple
- You can organize your ideas clearly
- You'll never forget to buy milk!

And the most important thing: the audience won't miss the point of your presentation



The background of the slide is a textured, muted purple color. Scattered around the edges are several black silhouettes of ants, some facing left and some facing right, creating a border effect.

Market

This can be the part of the presentation where you introduce yourself, write your email...

Ants nests personal organizer

Mercury

Mercury is the closest planet to the Sun and the smallest one in the Solar System—it's only a bit larger than the Moon

Venus

Venus has a beautiful name and is the second planet from the Sun. It's hot and has a poisonous atmosphere



How is this done?

Mercury

It's the closest planet to the Sun and the smallest one in the Solar System

Venus

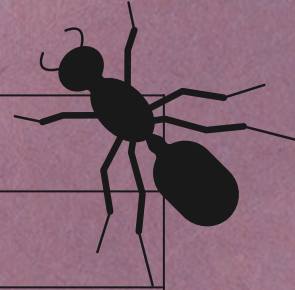
Venus has a beautiful name and is the second planet from the Sun

Mars

Despite being red, Mars is actually a cold place. It's full of iron oxide dust



This a table with the topics



01	How to choose an enclosure	06	Making the lid
02	Cover the drainage layer	07	Encouraging ants
03	Add in some soil	08	Using heat and fertilizer
04	Making the soil gradient	09	The green headed ants
05	Layout	10	Winner of the contest



A few considerations

Venus

Venus is the second planet from the Sun

Mars

Despite being red, Mars is a cold place

Jupiter

It's the biggest planet in the Solar System

Saturn

Saturn is a gas giant and has several rings



Curiosities about ants

Mercury

Mercury is the smallest planet of them all

Venus

Venus is the second planet from the Sun

Mars

Despite being red, Mars is actually a cold place

Jupiter

Jupiter is the biggest planet of them all

Saturn

It's composed of hydrogen and helium

Neptune

Neptune is the farthest planet from the Sun



Awesome words





“This is a quote, words full of wisdom that someone important said and can make the reader get inspired.”

—Someone Famous



**A picture is worth
a thousand words**









To reinforce the concept, try using an image

Images reveal large amounts of data, so remember: use an image instead of a long text. Your audience will appreciate it





150,000

Big numbers catch your audience's attention

The background of the entire image is a textured, light purple surface. Scattered across this background are several black silhouettes of ants of various sizes and orientations. One large ant is in the top right corner, another is in the top left, and several others are in the bottom left and center-left areas.

333,000

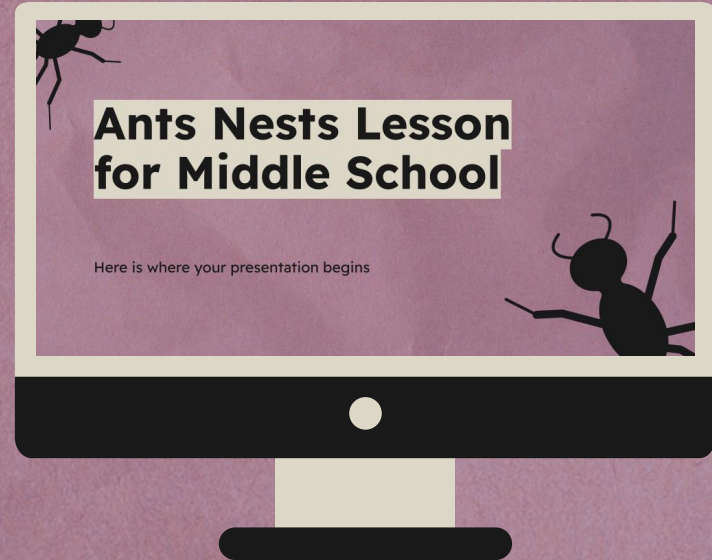
The Sun's mass compared to Earth's

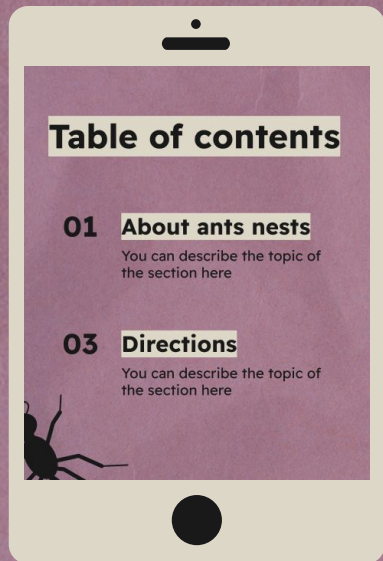
386,000 km

Distance between Earth and the Moon

Desktop mockup

You can replace the image on the screen with your own work. Just right-click on it and select “Replace image”





Tablet mockup

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Phone mockup

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This is a map



● Mercury

Mercury is the smallest planet of them all

● Venus

Venus is the second planet from the Sun

Our team



Jenna Doe

You can speak a bit about this
person here



Timmy Jimmy

You can speak a bit about this
person here



This is a timeline



01

Mercury

Mercury is the smallest planet of them all

02

Mars

Despite being red, Mars is actually a cold place

03

Jupiter

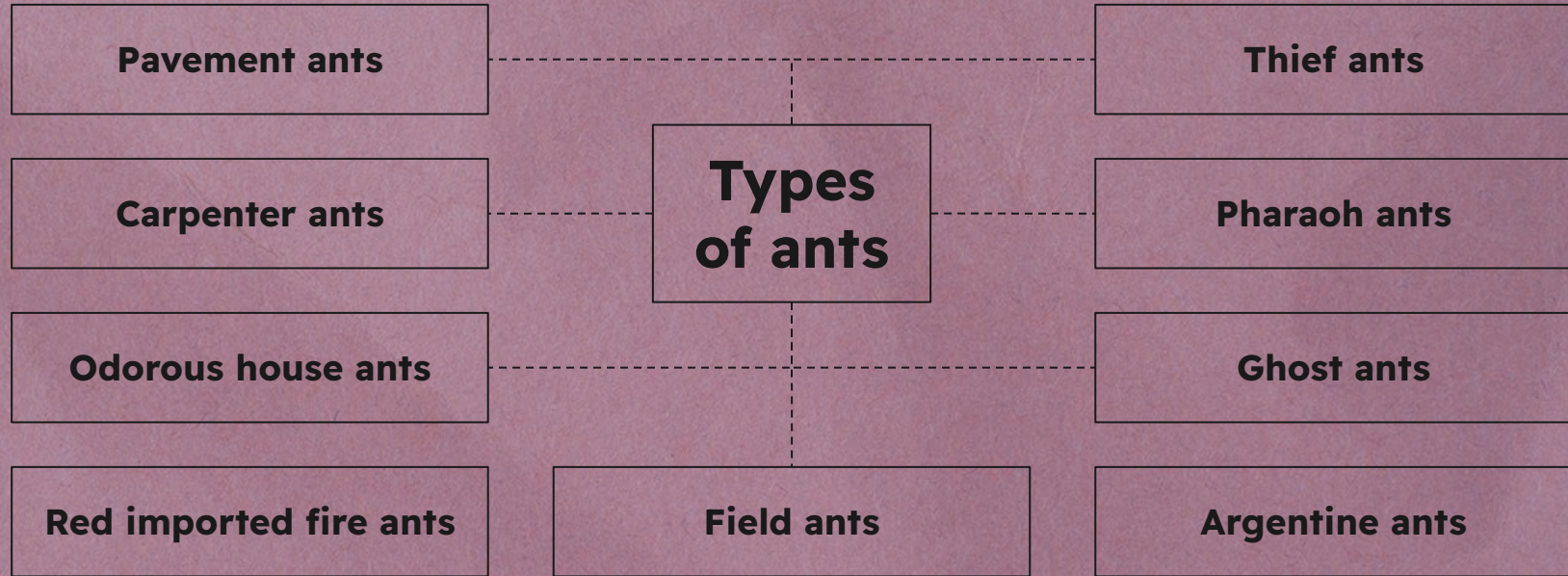
Jupiter is the biggest planet in the Solar System

04

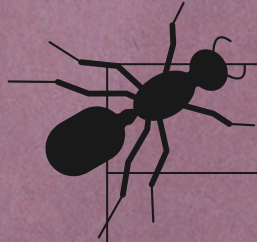
Neptune

Neptune is the farthest planet from the Sun

9 types of ants



Another table for the lesson



Types of ants nests

Mercury	Venus	Mars
Mercury is the smallest planet of them all	Venus has a beautiful name, but also high temperatures	Despite being red, Mars is actually a cold place
Saturn is the second-largest planet in the Solar System	Jupiter is the biggest planet in the Solar System	Neptune is very far away from the Sun

This is a graph

Venus

34.5%

Venus is the second planet from the Sun

Mars

10.9%

Despite being red, Mars is a cold place

21.8%

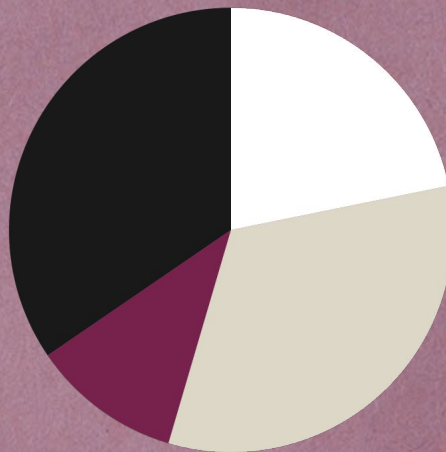
Jupiter

It's the biggest planet in the Solar System

32.7%

Saturn

Saturn is a gas giant and has several rings



Follow the link in the graph to modify its data and then paste the new one here. **For more info, click here**

This is a diagram



Ants nests organization

Mercury

It's the closest planet to the Sun and the smallest one in the Solar System

Venus

Venus has a beautiful name and is the second planet from the Sun

Mars

Despite being red, Mars is actually a cold place. It's full of iron oxide dust

3 interesting facts about ants



01

Earth

Earth is the third planet from the Sun and the only one that harbors life in the Solar System. This is where we all live on

02

Mars

Despite being red, Mars is actually a cold place. It's full of iron oxide dust, which gives the planet its reddish cast

03

Jupiter

Jupiter is a gas giant and the biggest planet in the Solar System. It's the fourth-brightest object in the night sky

Conclusions

About ants

Mercury

Mercury is the
smallest planet

Venus

Venus has a
beautiful name

Earth

Earth is the planet
where we all live on

Mars

Despite being red,
Mars is very cold

Jupiter

Jupiter doesn't
have a solid surface

Saturn

Saturn was named
after a Roman god

Neptune

Neptune is far away
from us

Pluto

It's now considered
a dwarf planet

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This is a slide structure based on a multi-purpose presentation for education
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Thanks slide	You must keep it so that proper credits for our design are given
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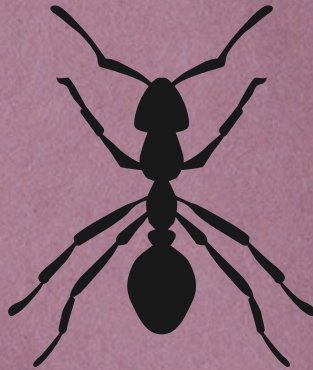
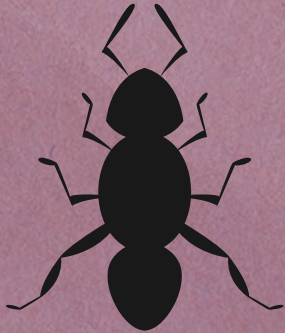
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- Insect silhouette collection
- Insect silhouette pack
- Realistic insect silhouette collection



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- Top view paper material
- Arrangement of different sized books with copy space
- Students learning at school in their classroom
- Portrait of young man with afro dreadlocks and white t-shirt outdoors
- Selfie portrait for videocall

Vectors

- Flat insect silhouette collection



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(<https://fonts.google.com/specimen/Readex+Pro>)

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#ffffff

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Pana



Amico



Bro



Rafiki

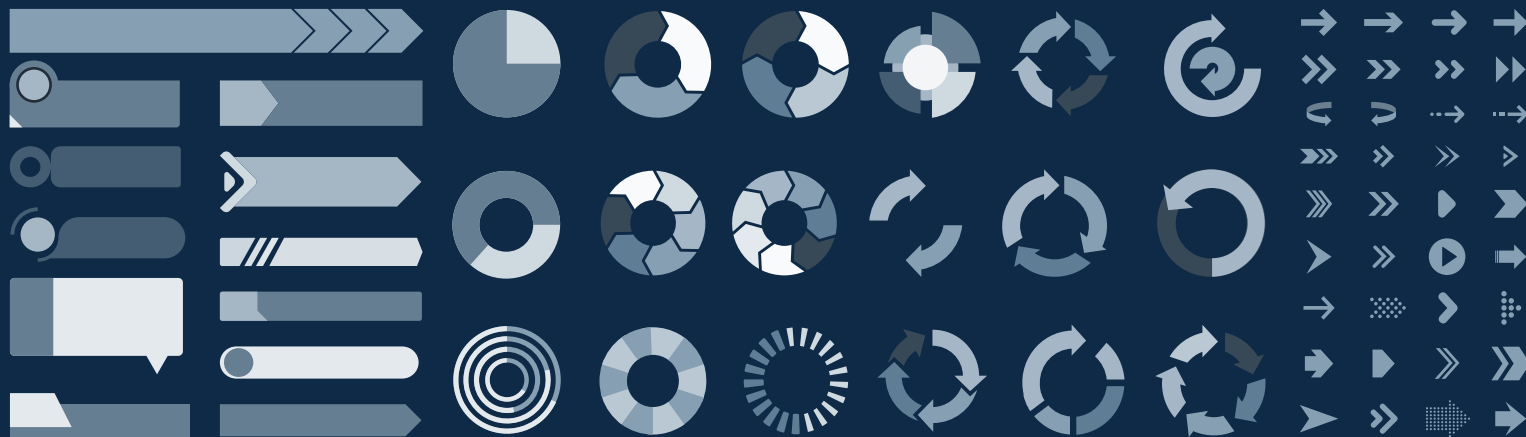


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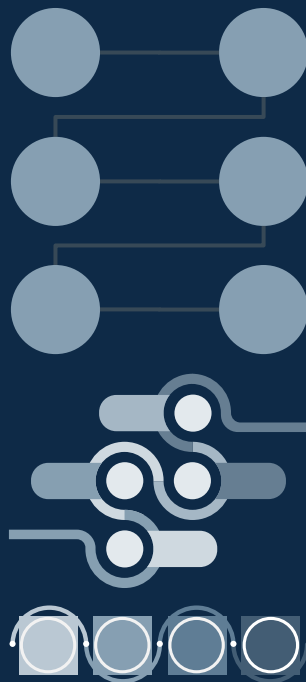
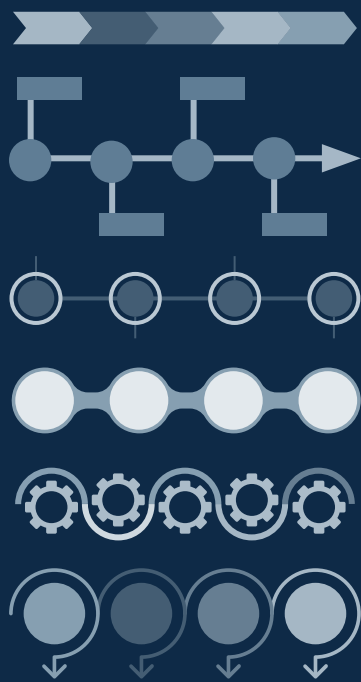
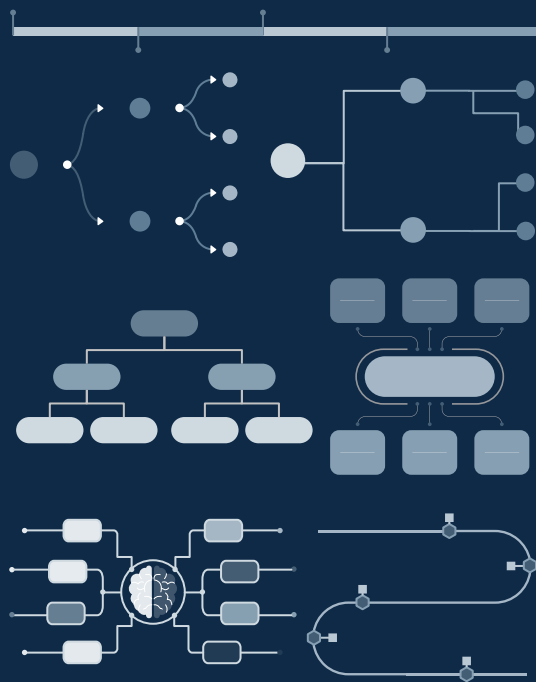
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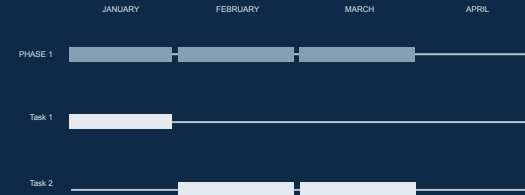
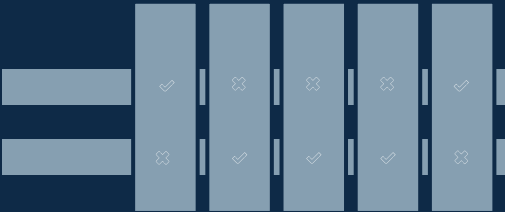
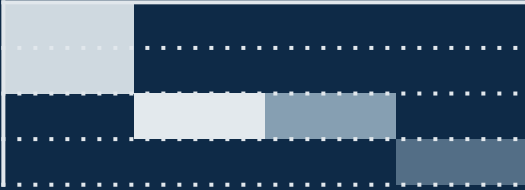
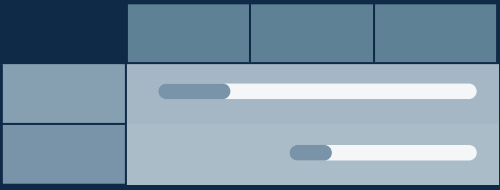
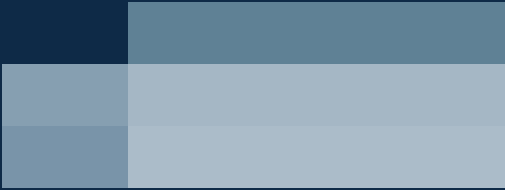
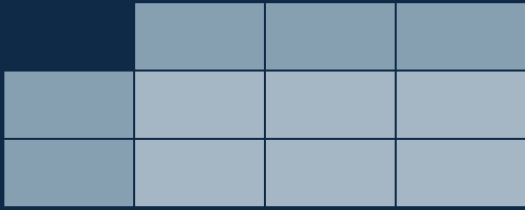
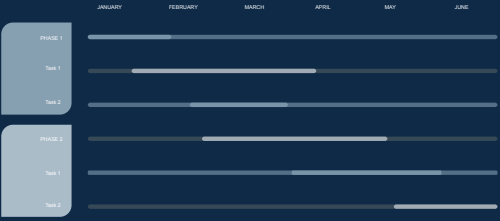
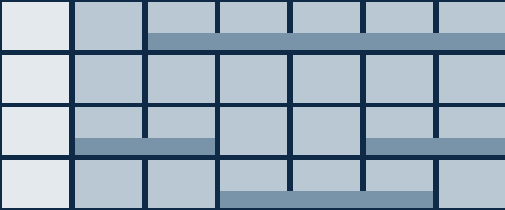
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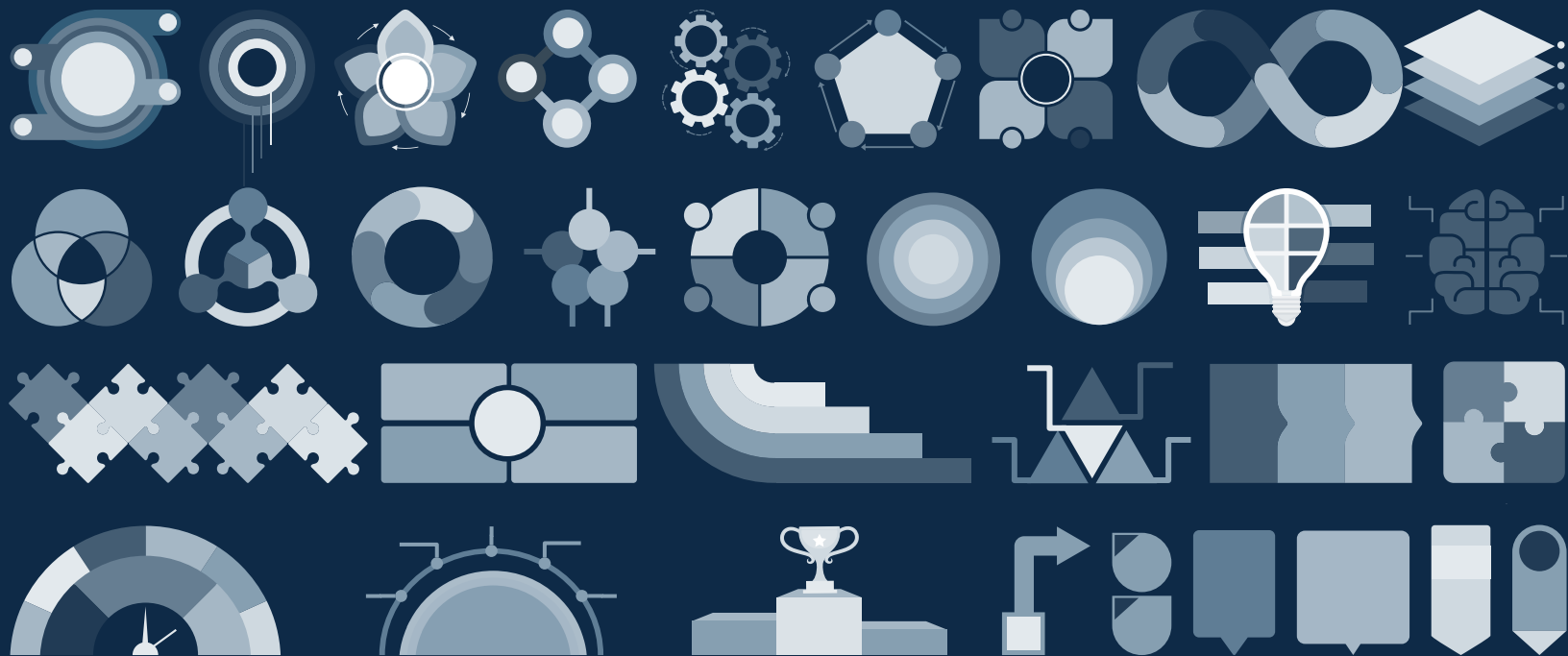
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Medical Icons



Business Icons



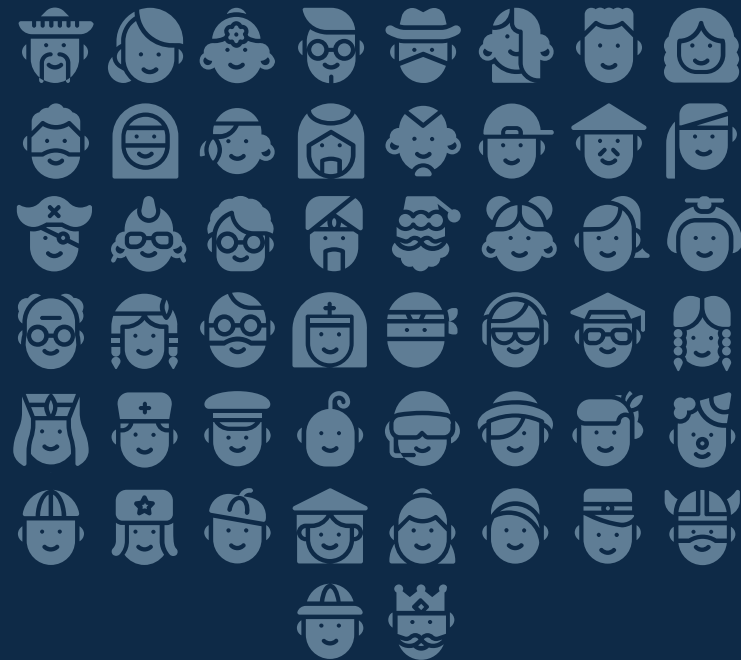
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