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Guide to Connected Schema Markup

What is Connected Schema Markup?

> Connected Schema Markup defines relationships between the entities (or topics) within your page, across your site and beyond.
>
> It allows you to build your knowledge graph and helps search engines understand your content more clearly through its relationship with other entities on your site and the web.
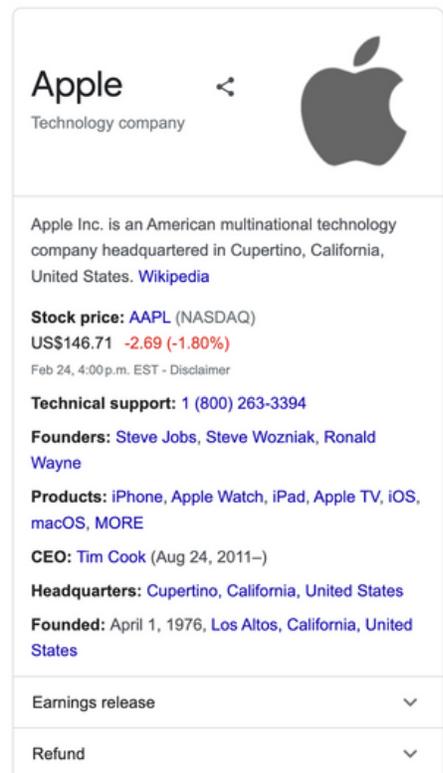
Is connected Schema Markup a new concept?

It may surprise you that connected Schema Markup is an essential part of the design of the World Wide Web from Tim Berners-Lee in chapter 12 of "Weaving the Web: The Original Design and Ultimate Destiny of the World Wide Web by its inventor" written in 1999.

Furthermore, the Schema.org community standards, established in 2011, provide us with a standard vocabulary to make connecting semantically similar concepts easier. More recently, the proliferation of knowledge graphs, like Google Knowledge Graph and Wikidata, provide the basis for connecting Schema Markup across the web to well-established identifiers.

Anytime you see a Google Knowledge panel (see the image on the right), you are actually seeing the knowledge that Google has inferred through multiple knowledge graphs.

This is usually a combination of Google's own proprietary knowledge graph and open-source knowledge graphs like Wikipedia. However, the Schema Markup (a.k.a Structured Data) you add to your site can also be a source of knowledge for Google. Let's dig further into what a knowledge graph is and how you can develop it through connected Schema Markup.

Apple
Technology company

Apple Inc. is an American multinational technology company headquartered in Cupertino, California, United States. Wikipedia

Stock price: AAPL (NASDAQ)
US$146.71 -2.69 (-1.80%)
Feb 24, 4:00 p.m. EST · Disclaimer

Technical support: 1 (800) 263-3394

Founders: Steve Jobs, Steve Wozniak, Ronald Wayne

Products: iPhone, Apple Watch, iPad, Apple TV, iOS, macOS, MORE

CEO: Tim Cook (Aug 24, 2011–)

Headquarters: Cupertino, California, United States

Founded: April 1, 1976, Los Altos, California, United States

Earnings release

Refund

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What is a Knowledge Graph?

> A knowledge graph is a collection of relationships between things defined using a standardized vocabulary, from which new knowledge may be gained through inferencing.
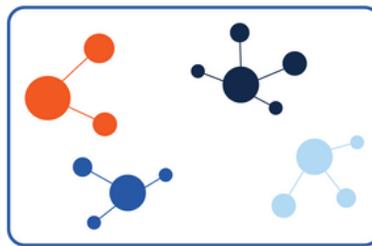
The diagram below illustrates the main processes leading to a knowledge graph.
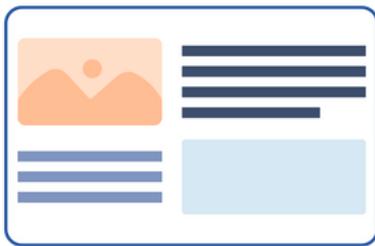
Data

The content on your website is created and presented to be accessible to a human audience.

Without applying Schema Markup to the page, search engines will do their own interpretation of what the page is about, which might not be accurate.

Standardization

Schema Markup is the standardized vocabulary used by search engines to understand the content and entities on your site.

By applying Schema Markup to your page, you are translating your content into the language used by search engines. They can now interpret your content more accurately.
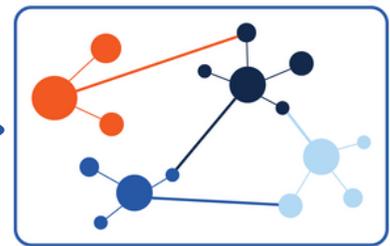
Connection

You can further connect the entities on your website to other entities on your website and beyond.

You are building your knowledge graph by connecting the entities through your Schema Markup. Search engines can use these knowledge graphs to answer search queries based on how the information is connected.

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What are you connecting your Schema Markup to?

You can connect the entities on a page to other entities on your website.

> Example: You run a marketing firm and you have a homepage that represents your company and might add <u>Organization</u> or <u>LocalBusiness</u> markup to that page.
>
> You offer SEO, PPC and other services and you have pages describing each service in detail. After marking up those pages with <u>Service</u> markup to those pages, you can use the <u>provider property</u> to connect that page to your <u>Organization</u>. This makes it explicit to search engines that these services are provided by your organization.

You can connect the entities on a page to authoritative knowledge bases that define the same entities (e.g. Google Knowledge Graph, Wikipedia or Wikidata)

> Example: You run a State American Football association and you marked up your about page with <u>AboutPage</u> Schema Markup. You could use the <u>about property</u> to connect the markup on your AboutPage page to a <u>Wikipedia</u> page that describes American football in detail.

You can connect the primary entity on a page to the relevant rich results.

> Example: You are a large tech company offering specialized services. You have a service page that focuses primarily on the service you provide and you'll add <u>Service</u> markup to those pages.
>
> You want that page to be eligible for a rich result but Google does not award any rich results for the Service type. However, your service page does have FAQ content. You can use the <u>subjectOf property</u> to state that the Service is the subject of the FAQPage and achieve an FAQ rich result.

What is Connected Schema Markup Important?

1. It helps search engines contextualize your content.

> At its core, Search is about understanding language. – Google

The main goal of a search engine is to understand what a user is searching for and provide the best possible information to answer that user's query. To do so, they need to first understand your content, and you can help them understand your content by adding Schema Markup to your page.

But that isn't always enough. What if you are talking about things that are new or not well-defined? For example, you have a page talking about Java. But Java could refer to a myriad of things: Java Coffee, Java the programming language, Java the island in Indonesia.

For Google to fully interpret and understand your content, they have to spend computing dollars to crawl and render your site, as well as process the data to try and understand its context. We know that everyone gets assigned a crawl budget, so it is reasonable to assume they also want to limit their costs to understand your content. In fact, in late 2022, we observed Google cutting back on crawl budgets.

When you use Schema Markup and connect it with external definitions like Wikidata or other entities on your website, you are making it easier for search engines to interpret the concepts on your page. If your page is actually talking about Java, the programming language, you can use properties within the Schema Markup to connect the page to the Wikidata page for Java to clarify which Java you are referring to in your content.

Adding connected Schema Markup is your way to control how search engines understand your content, without them having to invest a large budget in complicated machine learning.

Make it easy for Google and Bing. Speak directly to the machines with your company's interpretation of what the content is about. Don't let search engines make **guesses** about the meaning of your content and what your company is about.

The result? Search Engines can easily provide accurate results for user queries and drive more organic traffic to your pages.

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2. It helps Google train their machines and AI bots.

During the "Structured Data: What's it all about?" episode of Google's Search off the Record Podcast, Ryan Levering spoke about how machine learning utilizes Structured Data as a data source.

If machine learning uses structured data to validate or understand the content, connected structured data will teach the machine to infer the meaning and connections between different entities on the site.

As Google shifts their focus toward AI-powered search, your connected Schema Markup will help machines learn how to clarify the topic on the page and provide more accurate search results.

3. It helps you develop E-E-A-T.

Experience, Expertise, Authoritativeness, and Trustworthiness are all key considerations in Google's search quality rater guidelines.

If you want to be an authority on a certain subject, creating connected Schema Markup allows you to clearly define what the content on your site is about and inform search engines about the subject that you are trying to be an authority on.

For example, your hospital wants to be known for its robotic surgeries and you have a medical procedure page that talks about robotic surgeries.
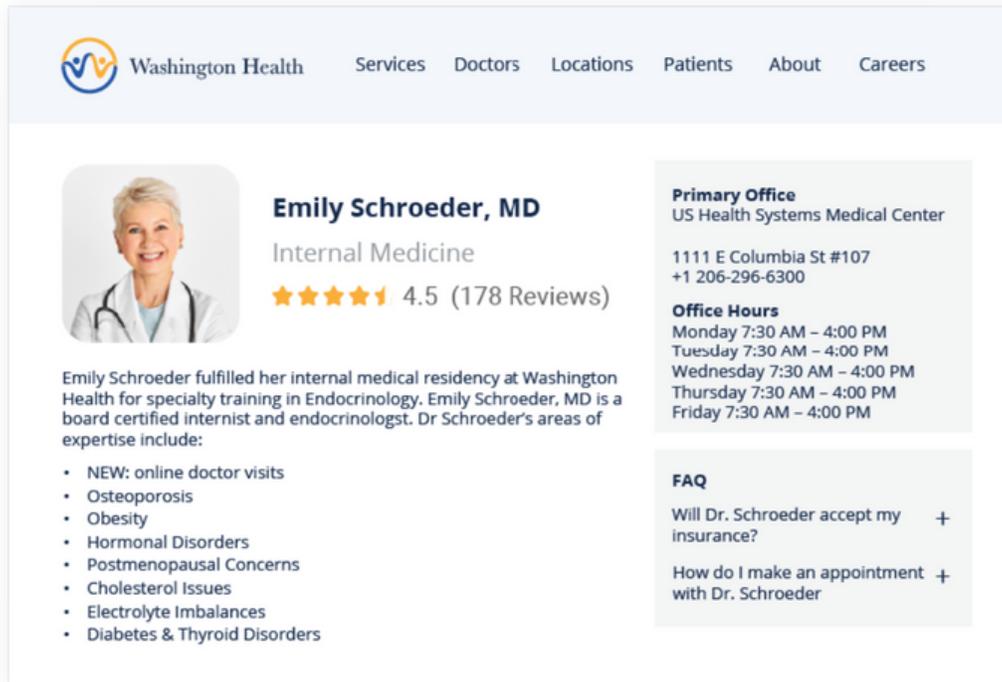
- **Do all your relevant physicians have robotic surgery connected to the Schema Markup on their pages?** If they do, search engines can infer which physicians are able to perform this surgery.
- **Have your physicians received positive reviews regarding these robotic surgeries?** If they do, search engines can infer the quality of their care through these reviews.

These are all questions people might ask that Google needs to answer. When you start connecting robotic surgery to other entities on your page, you can identify any content that provides further context to the subject matter and highlights your E-E-A-T.

By doing connected Schema Markup, Google is also going to start directing users searching for robotic surgery to your page because they understand and are confident in your organization's expertise through the connected markup.

Connected Schema Markup in Practice

Let's illustrate this with an example.

Emily Schroeder is a Physician at Washington Health and this is her Physician page.
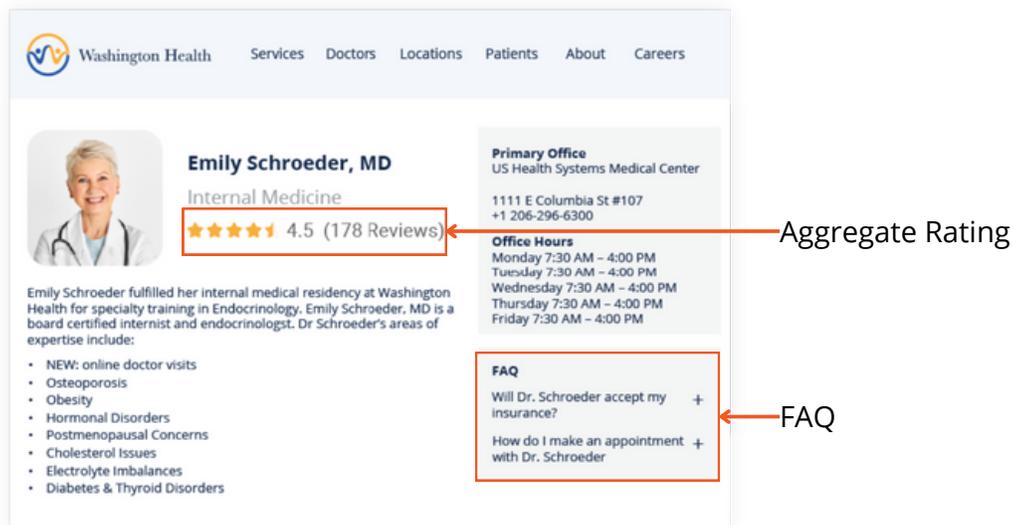
The content on this page focuses mainly on the Physician, therefore the <u>Physician</u> type should be applied along with the available properties for that type.

Here's what the Physician markup of her page would look like to start.

```
@type: Physician
    url
    name
    telephone
    description
    openingHours
    parentOrganization
    medicalSpecialty
    availableService
```

Connecting the primary entity of the page to the relevant rich results

To achieve a rich result for this page, we need to include other types of Schema Markup to make the page eligible for the targeted rich result. This page currently contains aggregate rating and FAQ content.

If the page is typed as a Physician, you have to identify properties within the Schema.org vocabulary to describe how the Physician is connected to both the FAQ and the aggregate rating.

Here's how you would connect the Physician to the FAQPage Type.

```
@type: Physician
    URL
    name
    telephone
    description
    openingHours
    parentOrganization
    medicalSpecialty
    availableService
    subjectOf
        @Type: FAQPage
        mainEntity
                @Type: Question
                acceptedAnswer
                        @Type: Answer
```

Connecting to other entities on your website

Emily Schroeder is a Physician at Washington Health so we want to connect the Physician markup to Washington Health, to reflect Washington Health as the parent organization.

Here's how you can connect both entities.

```
@type: Physician
    URL
    name
    telephone
    description
    openingHours
    parentOrganization
        @Type: MedicalOrganization
    medicalSpecialty
    availableService
    subjectOf
        @Type: FAQPage
        mainEntity
            @Type: Question
            acceptedAnswer
                @Type: Answer
```

Need help determining how to connect two Schema.org types?

Pro Tip:
Use our Schema Paths Tool to generate a listing of all the possible Schema.org properties that can connect the two schema types.

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Connecting to other entities beyond the website

To further clarify the entities on a page, you can also connect it to external definitions provided by authorities like Wikidata and Wikipedia. Emily Schroeder specializes in endocrinology and we want to connect the medicalSpecialty property to the Wikidata definition of Endocrinology.

Here's how you would connect the Wikidata URL to the Physician markup.

```
@type: Physician
    URL
    name
    telephone
    description
    openingHours
    parentOrganization
        @Type: MedicalOrganization
    medicalSpecialty
        https://www.wikidata.org/wiki/Q162606
    availableService
    subjectOf
        @Type: FAQPage
        mainEntity
            @Type: Question
            acceptedAnswer
                @Type: Answer
```

Need help finding the right Wikidata URL?

Pro Tip:
Use our Wikidata Lookup by Name tool to link your entities to resources in Wikidata, Wikipedia and the Product Ontology. This will help to further define your entities.

Start Connecting Your Schema Markup Today

Connected Schema Markup is complicated and implementing it is no easy feat. On top of connecting the markup, you also need to ensure your markup is aligned with the content on your page, adding an additional layer of complexity.

That said, the benefits of this strategy can aid your SEO in the long run.

When search engines like Google fully understand your content, they can provide results that better match user queries and drive more traffic to your pages.

Search engines also look at the quality of your content as a ranking factor. Doing connected Schema Markup highlights your E-E-A-T to search engines, which could improve your page ranking.

Lastly, we are rapidly approaching a future where search engines are powered by AI. By implementing connected Schema Markup, you can help search engines infer and access new knowledge about your organization and more.

There is no better time to start implementing this complex SEO strategy than now.

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Get the Schema App Expertise You Need

At Schema App, we do more than just get rich results for our customers.

We understand the importance of connected Schema Markup and designed our solution to help our customers easily create, connect and manage their markup.

- Our team of <u>Schema Markup experts</u> will help you develop a connected Schema Markup strategy and manage your entire Schema Markup process from strategy to results.

- Our <u>Highlighter</u> tool will dynamically generate and deploy Schema Markup based on the content on the page. Any changes you make to your content will automatically be updated in your Schema Markup, making it easy to manage your knowledge graph.

- Our Linked Entity Recognition feature automates the process of identifying entities on a page, linking them to external identifiers from authoritative knowledge bases like Wikipedia and the Google Knowledge Graph and automatically embedding them within the Schema Markup.

Don't let the complexity of Schema Markup get in your way of success. Get in touch with us to learn more about our end-to-end Schema Markup solution.

Get in touch

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🌐 <u>www.SchemaApp.com</u>

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